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The Cutting Edge Of Storage

Smaller Vendors Have Some Of The Market's Biggest (& Brightest) Ideas

by David Garrett

THINK OF STORAGE, and names such as EMC and NetApp jump to mind, as well they should. EMC has a work force greater than 26,000, and it's an anchor of the S&P 500. NetApp is smaller but no less impressive, with more than \$1.6 billion in revenues in the last year alone. It's also a member of the S&P 500, not to mention the NASDAQ-100 and the Fortune 500.

But it's not the only game in town. In fact, there are dozens of smaller firms in today's storage market, and they have some of the biggest—and maybe the brightest—concepts in modern data management.

Pillar Data Systems: Can One Platform Do It All?

Storage is a complex beast; merely its acronyms—LUN, DAS, DAT, to name a few—can make the knees quiver. If you're searching for a simpler approach that retains the power of complex systems, look at Pillar Data Systems' Axiom (www.pillardata.com).

It supports SAN, NAS, or both, so you can merge the high performance of the former with the low cost of the latter. It also offers the benefits of D2D (disk-to-disk), which means no messing with pokey tapes. And its homegrown software lets you migrate data among different tiers for high-end ILM (Information Lifecycle Management), all in one system for ease of use.

"What we've done is architect the solution and defined a lot of the software that manages this solution to make it simple to deploy," says Russ Kennedy, Pillar's senior director of marketing and strategy.



Indeed, even the names of Axiom's components are user-friendly: the Pilot, or system controller, which directs all the system's components; the Slammer, or storage

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hardware or software is deployed, the live production network will most likely span a greater distance, possibly around the globe. Rather than zipping across a switch to a computer sitting on the next desk, the traffic from the server may have to traverse thousands of miles of cable and cross through countless routers and switches to get there. Systems that performed well in a lab may be inadequate when used across a WAN.

Producing More Realistic Network Conditions

In order to verify that a hardware system or software

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Systems that performed well in a lab may be inadequate when used across a WAN.

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Revolutionary Ideas In Storage

There are dozens of smaller manufacturers developing unique approaches to storage. Find out what a few are doing. Plus get an inside look at some new storage trends and see how storage commoditization could change the way you buy products.

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■ **Altiris** announced significant updates to numerous IT asset management products. ■ **RestartIT** RecoveryRack from **AmeriVault** lets customers utilize rack space in the company's primary data center to facilitate rapid vault-to-server recoveries. ■ **Aventail** introduced an addition to its family of secure remote access appliances. ■ **Courion** announced its Courion RoleCourier role management product. ■ **Ecora** released Ecora Documenter, a free utility for network administrators. ■ **Elemental Security** released a new regulatory policy framework. ■ **Juniper Networks** released its Intrusion Detection and Prevention platform. ■ **McAfee** announced new features for its Secure Messaging Gateway and Secure Internet Gateway appliances. ■ **Telect** released new versions of its T3 cross-aisle panels, which have optional movable LED strips that let administrators identify circuits. ■ **Webroot Software** announced its latest release in antispyware software, Spy Sweeper Enterprise 3.0.

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CORRECTION: In the June 16 issue, the information in the Intel & AMD Processor Comparison chart on page 32 was inadvertently flipped. We apologize for the error.

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Upcoming IT Events

- JUNE -

C3 Expo

June 27-29
New York, N.Y.
www.c3expo.com

Enterprise Architecture
Conference Series
June 27-28
San Francisco, Calif.
www.brainstorm-group.com

- JULY -

SANSFIREF 2006
July 5-13
Washington, D.C.
www.sans.org

Search Engine Strategies 2006
July 10-11
Miami, Fla.
www.jupiterevents.com

ITS Gov
July 26
Washington, D.C.
www.itsgov.com

- AUGUST -
National Institute of
Governmental Purchasing
August 5-9
Tampa, Fla.
www.nigp.org/Events/Forum.htm

Search Engine Strategies 2006
August 7-10
San Jose, Calif.
www.jupiterevents.com

SHARE
August 13-18
Baltimore, Md.
www.share.org

Business Intelligence &
Data Warehousing Conference
August 15-17
San Francisco, Calif.
www.sharedinsights.com

TDWI World Conference
August 20-25
San Diego, Calif.
www.tdwi.org

Business & Technology
Solutions Show
August 22-23
Rosemont, Ill.
www.btshow.org

- SEPTEMBER -
HP Technology Forum 2006
September 17-21
Houston, Texas
www.hptechologyforum.com

COMMON Fall 2006 Conference
September 17-21
Miami Beach, Fla.
www.common.org/conferences/2006/fall/index.html

Interop
September 18-22
Las Vegas, Nev.
www.interop.com/newyork

Visit Processor at Booth 568
www.processor.com

IT Service Management
Forum Conference & Expo
September 18-22
Salt Lake City, Utah
www.jupiterevents.com/itsmf/fall06

Business Rules Symposium Series
September 19-20
Washington, D.C.
www.brainstorm-group.com

Enterprise Architecture
Conference Series
September 19-20
Washington, D.C.
www.brainstorm-group.com

Government Technology
Conference East 2006
September 25-28
Albany, N.Y.
www.govtech.net/gtc/index.php
/GTCEast2006

Intel Developer Forum
September 26-28
San Francisco, Calif.
www.intel.com/idf

MarketPlace NEWS



Gates To Shift Roles

MICROSOFT CHAIRMAN and Co-founder Bill Gates will assume a more limited role with the software company beginning in July 2008 in order to work full time for the Bill and Melinda Gates Foundation. Gates and his wife created the foundation in 2000 to focus on funding global health and education initiatives. Ray Ozzie, Microsoft's CTO, is now the company's chief software architect; Craig Mundie, CTO for advanced strategies and policy, will now be the chief research and strategy officer. Both will work closely with and report to Gates during the next two years. Once Gates steps down, Mundie and Ozzie will report to Steve Ballmer, CEO.

Sophos: Email Safer Than Last Year

DURING THE FIRST SIX MONTHS of this year, about one out of every 91 emails contained a virus or malware, according to security firm Sophos. That's down from one out of every 35 emails last year. "Email, as far as viruses are concerned, is actually safer than it was last year," says Graham Cluley, a Sophos senior technology consultant. The new push by virus writers is in Trojan horses, which account for more than 80% of all new malware programs Sophos sees. Sophos also says that virus writers are conducting more targeted attacks, rather than the mass attacks of the past, in an effort to evade detection.

Microsoft Pushes For Interoperability

MICROSOFT IS CREATING an Interoperability Customer Executive Council with the goal of making its products work better with products from other manufacturers. The group will be headed by Bob Muglia, senior vice president of Microsoft's Server and Tools, and consists of about 30 IT executives from large Microsoft customers. The new interoperability council will be part of a "formalized process where we pull people together and think about the various scenarios," says Tom Robertson, Microsoft's general manager of interoperability and standards. The first of the twice-yearly meetings is scheduled for September in Redmond, Wash.

U.S./China Tech Trade
May Be Further Restricted

THE BUSH ADMINISTRATION plans to place increased restrictions on the types of technological commodities that can be exported to China. The new plans will cover 47 categories of technology goods that have until now escaped restrictions. The changes come as a result of a recent report from the Commerce Department's Office of Inspector General, which said that existing loopholes could be making it possible to supply sensitive U.S. products to the Chinese.

Global PC Shipments Up

MARKET RESEARCHER IDC reports first-quarter worldwide shipments of PCs surpassed March's expectations of 11.8% growth, rising to 12.6%. IDC says Q1 growth in the Asia-Pacific region, including Japan, exceeded expectations, but growth in the United States and Western Europe slowed. However, this year's outlook has improved, as IDC now predicts shipments will increase 10.8%, up from

its previous 10.5% projection. Likewise, IDC increased its growth expectation for next year from 10.7 to 11.7%. Global PC shipment growth has slowed from the past few years, when it was 16% last year and 15.1% in 2004.

Forefront Named Microsoft's New Brand

MICROSOFT'S CLIENT, SERVER, AND NETWORK perimeter security products will get a new name. The first product released under the new Forefront brand will be Forefront Client Security (formerly Client Protection), scheduled for beta release later this year. Other programs scheduled for release next year include Forefront Security for Exchange Server and Forefront Security for SharePoint. The branding change and product releases are part of a push by Microsoft to increase its security market presence.

CA Purchases MDY Group

IT MANAGEMENT SOFTWARE FIRM CA is expanding its range of information management capabilities through internal development and acquisitions. It recently purchased MDY Group, a firm specializing in software and services for enterprise records management. CA plans to support and market MDY's full line of records management products and services, as well as integrate the company's technology with its own CA Message Manager. CA rivals Symantec and Zantaz both have existing technology partnerships with MDY, which CA says it will maintain post-acquisition.

Money Lost To Cybercrime Down 18%

THE 2006 SURVEY from the Computer Security Institute and the FBI reports that financial losses stemming from cybercrime have dropped 18%, from an average loss of \$204,000 last year to \$168,000 this year. These figures continue the downward trend; this year's average is down 68% compared to 2004's. The survey, which polled 615 CSI members in the United States, also reveals fewer laptop thefts, viruses, and insider Internet access abuse, although the threats are still those reported most. About 80% of respondents use antispyware, while nearly 100% use firewall and antivirus protection.

Linux's Move To Mobile

BY THE END OF NEXT YEAR, users of mobile devices could have an open-source option with a

Linux-based mobile OS. Network operators NTT DoCoMo and Vodafone and handset makers Panasonic, Samsung, NEC, and Motorola plan on forming an independent non-profit group that will share the cost. The group also hopes to limit the number of mobile OSes on the market and speed up the production of mobile software and hardware. Because Linux is an open-source OS, the high rate of competition will, ideally, cause prices for embedded versions for phones to drop.

Revenue Up For IT Services

ACCORDING TO RESEARCH FIRM GARTNER, global IT services saw an increase in total revenue of 6% in 2005 for a total of \$624.4 billion. The two companies at the top of the pack were IBM with 7.6% marketshare and EDS (Electronic Data Systems) with 3.2%. EDS' marketshare actually declined by 0.5% over the previous year, however, while IBM's grew 2.5%. The largest market for IT service providers in 2005 was financial services, with revenue of \$141.3 million, which represented a 7% growth.

Sun Joins Dojo Foundation

SUN MICROSYSTEMS HAS JOINED AOL and IBM as the third major IT vendor to become a part of the Dojo Foundation. The foundation is working on creating an open-source development kit for creating Ajax (Asynchronous JavaScript and XML) applications. According to the project's lead developer Alex Russell, Sun's involvement in the project will help the group make Dojo an enterprise-grade developer tool and ensure that it will not be tied to a particular vendor's products.

Siemens & Nokia Merge Telecom Infrastructure Units

TO FORM A BIGGER PRESENCE in the telecom industry, Nokia and Siemens will combine their equipment units. With the deal, the Siemens carrier business in fixed and mobile networks will join Nokia's Networks Business Group, although no money will pass between the parent companies. The firms will reap some savings from the agreement, but they expect to eliminate up to 9,000 jobs. The new venture, "Nokia Siemens Networks," will be headquartered in Finland, Nokia's home country, and will be the third largest telecommunications infrastructure manufacturer.

WATCH THE STOCKS

This information provides a quick glimpse of current and historical stock prices and trends for 16 major companies in the technology market.

Company	Symbol	Year Ago	June 12	June 19	% change from previous week
Avaya	AV	\$8.19	\$11.31	\$11.23	▼ 0.71%
BEA Systems	BEAS	\$8.20	\$11.76	\$12.65	▲ 7.57%
Computer Associates	CA	\$27.39	\$21.42	\$21.31	▼ 0.51%
Cisco Systems	CSCO	\$19.32	\$19.48	\$19.82	▲ 1.75%
Dell	DELL	\$40.66	\$24.89	\$24.06	▼ 3.33%
Electronic Data Systems	EDS	\$19.25	\$23.77	\$23.97	▲ 0.84%
Google	GOOG	\$274.80	\$381.54	\$388.14	▲ 1.73%
HP	HPQ	\$23.88	\$29.87	\$33.57	▲ 12.39%
IBM	IBM	\$76.30	\$77.02	\$77.67	▲ 0.84%
Intel	INTC	\$26.92	\$16.86	\$18.24	▲ 8.19%
McAfee	MFE	\$26.72	\$23.15	\$22.70	▼ 1.94%
Microsoft	MSFT	\$25.26	\$21.71	\$22.55	▲ 3.87%
Oracle	ORCL	\$12.62	\$13.25	\$14.29	▲ 7.85%
Red Hat Software	RHAT	\$12.98	\$26.05	\$25.53	▼ 2%
Sun Microsystems	SUNW	\$3.72	\$4.11	\$4.14	▲ 0.73%
Symantec	SYMC	N/A	\$15.63	\$15.81	▲ 1.15%

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Underneath Your Feet In The Data Center

Don't Take Your Flooring System Lightly

by Sixto Ortiz Jr.

FLOORING SEEMS LIKE a fairly prosaic item, but savvy data center administrators understand its importance. The raised floor in a data center is critical to ensure good airflow—and thus cooling—and is also the main path for routing the miles of cabling any good-sized data center is likely to have.

In this roundup, we take a look at flooring components and accessories, running the gamut from cabling management systems to run-of-the-mill items such as floor lifters, molding, and grommets. Something as simple as the design of floor tiles or the arrangement of cables underneath the floor could mean the difference between a smoothly running data center and a maintenance and performance headache.

Access Flooring Trends, Etc.

Tad Davies, executive vice president for the Bick Group, a data center design, construction, and maintenance firm, says there is less of a need today to install high access floors to enhance cooling, due to improved cooling technologies.

"With the introduction of new high-density cooling technologies that supply supplemental cooling from above, as well as in-row and racks that supply cooling, there is less of a need to have such high access floors," he says. Also, Davies adds, data centers are going with cementitious-filled steel panels instead of all-steel panels due to the higher cost and lower dynamic loading performance of all-steel panels.

In terms of mistakes and pitfalls to avoid, Davies recommends that administrators understand the

application and what's going on in the data center, paying particular attention to the fact that equipment is getting heavier and requires stronger rated access floors.

Also, Davies says, a critical mistake is failing to maintain flooring both from a structural

SNAPSHOT

Data Clean

A wide variety of flooring accessories plus data center cleaning services

www.Processor.com/DataClean

and cleaning perspective. Not paying attention to structural issues, he adds, could result in floor instability and even failure. Neglecting to clean a floor, he says, could result in reduced static dissipative characteristics.

Data Clean

Data Clean has been providing products and services into controlled environments, such as clean rooms, fabs, laboratories, and data centers since 1979. The company provides data center cleaning services and also sells a wide variety of flooring accessories for data centers and other types of controlled environments.

For example, Data Clean's KoldLok raised floor cooling products are a series of raised floor grommets designed to improve airflow in your data center and ensure cool air is reaching the areas where it's needed most. According to the company, the KoldLok series of raised floor grommets helps airflow by eliminating leakage of cold air around uncovered cable openings. The idea is to ensure cold air stays on its designed path and doesn't

encounter any obstacles or detours along the way.

The company also sells a variety of floor pullers and brackets that use suction cups to handle any weight of floor tiling, as well as flooring accessories such as L- and F-molding, grommets, various sizes of perimeter cutouts, and corner clips for L-molding. And of course, if you need to do cleaning on your data center, the company provides cleaning services compliant to ISO Class 8 or 9 data center cleanliness standards.

Tate Access Floors

Tate Access Floors is a Maryland-based installer and manufacturer of flooring systems used in a wide variety of settings, from office buildings to schools, court houses, casinos, and data centers.

Tate offers two types of flooring systems: steel and aluminum. The company's aluminum Floating Floors are designed for class M1 applications, such as data centers and clean rooms. Features include class A fire rating aluminum die cast panels, conductive gaskets, no ferrous materials (avoids magnetic field disruption), and a variety of panel coatings such as epoxy

SNAPSHOT

Tate Access Floors

Two types of flooring systems and the accessories to go with them

www.Processor.com/Tate

powder coat, metallic, and e-coat. Also, Tate's aluminum floors are available with two choices for flooring understructures: all aluminum and aluminum head with steel bases.

To support these installations, Tate offers a variety of accessories, including seismic braces, grommets, plenum dividers and air highways, grilles, and panel lifters. The company's Web site provides detailed specification documents on every one of these products, so finding the exact dimensions for the accessories you need is simple.

Bergvik

This Swedish company has been in the raised floor business since 1970, when it was founded as Ställverksprodukter AB by Paul Brändström. The company's Tech Floor is a raised floor system designed to provide the flexibility that data center administrators might need to accommodate changing technologies.

Features include steel floor understructure using pedestal supports, zinc-plated steel parts for corrosion prevention, high-density moisture resistant particle board floor panels (available in various finishes), floor height options ranging from 3 to 24 inch-

SNAPSHOT

Bergvik

Three types of flooring systems and available seismic frames

www.Processor.com/Bergvik

es, and seismic bracing frames that meet Telecordia Seismic Zone 4 standards. Available finishes for floor panels include alder, granite, marble, and vinyl. All finishes are simple to clean and resistant to chemical attack.

Accessories sold by Bergvik include lifting tools for floor panels, guardrails, border/fascia panels, ventilated floor panels, ramps, stairs, and seismic bracing frames. The seismic bracing frames are primarily used in telecom applications within seismically active regions, such as Northern California.

Flexspace

The Cablefloor system is Flexspace's answer to your cabling management woes. Because hardware cabling typically runs underneath the floor in most data centers, a system to help route cables in an organized manner can make life easier and even contribute to more uniform and effective data center cooling.

Flexspace's solution consists of a grid of cabling raceways attached to the data center subfloor. System parts include cable bridges to separate noncompatible wiring, screws and nylon clamps for securing the system, cable tie points molded to the system base to tidy up cabling, and support cylinders spaced 6 inches apart to bear the weight of

your cabling infrastructure and detailed documentation describing the work done and the details of your cabling infrastructure's physical layout.

The Bick Group

The Bick Group is a data center construction company that has been doing this line of work since 1964. The company offers both engineering and project management services designed to steer your project from conception to finish.

The company provides a plethora of services related to data center construction, from design to equipment procurement, construction, commission, and maintenance. Also, the Bick Group provides a Facility Analysis program to illustrate your options and what will work best for your environment.

The company's Access Floors division specializes in the design and installation of data center access flooring. According to the company, its expertise in other areas of data center construction

SNAPSHOT

The Bick Group

Data center construction expertise, from design to maintenance

www.Processor.com/BickGroup

makes it easy to integrate other aspects of data center construction, such as HVAC and wiring, into the design of your access floor.

Remember The Accessories

Data center flooring is an important consideration and an integral part of your data center infrastructure, so don't neglect it. As the Bick Group's Davies points out, "access flooring does often get overlooked because it is one of the least interesting components of data centers—it's not ensuring power availability (UPS) or maintaining room environment (CRACs [computer room air conditioning]) or protecting life and

Not paying attention to structural issues could result in floor instability and even failure.

equipment resting on the floor. The Cablefloor system is also designed for a maximum height of 2.5 inches, so it doesn't sport a huge footprint.

SNAPSHOT

Flexspace

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Buying Tips

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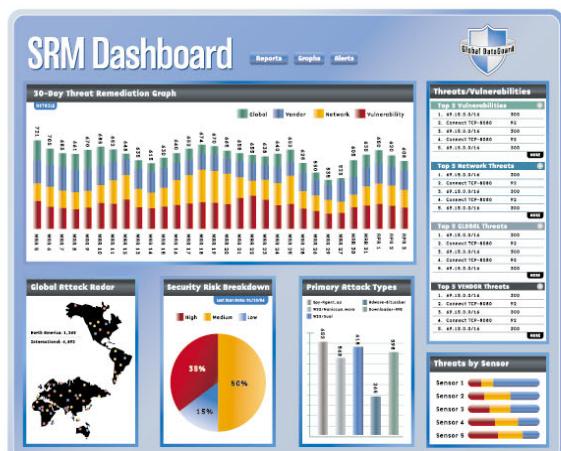
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Commodity Commotion

Storage Hardware Commoditization Gives Vendors An Opportunity To Improve Storage Management Offerings

by Ericka Chickowski

LIKE ANY ECONOMIC TREND, the commoditization of a product doesn't just happen all of a sudden. It is a gradual process that occurs over time, a period during which most experts are able to predict its coming. Such is the case for the commoditization of computer storage.

For years now, analysts and media pundits have talked about the impending commoditization of storage. Now that it seems as if the era of interchangeable storage hardware is upon us, the talk has quieted into reality.

"There's all sorts of stats out about how the cost of storage has gone from thousands to pennies," says Joe Clabby, founder of Clabby Analytics, a firm that researches storage trends. "I think that it already is a commodity, but I think there's still some obstacles in the way, like different APIs, application program interfaces, so there's some oddities out there."

Now the question is how will that reality play into the market, and how will those last few obstacles be overcome so that storage becomes easier for all businesses, not just those that

can afford expensive storage specialists?

Heterogeneous Storage Is Commoditized Storage

In the IT storage market, the shift toward interchangeable, heterogeneous storage systems is the main driver of storage commoditization, Clabby says. "I'm a big supporter of heterogeneous storage," he says. "That's where you get commoditization of storage. When you make storage management capable of managing heterogeneous storage farms, that's where you end up saving your money. The more storage looks the same and feels the same, the more flexibility you as a buyer have in being able to pick whatever vendor you wish to buy [from] at the price you wish to pay."

Clabby says that in the past, his boss likened the way IT storage was historically as a kind of roach motel. Once you bought from a certain vendor, you were locked

into its product lines and could never get out.

Now that storage equipment and storage networking is much more standardized (thanks in large part to the Storage Networking Industry Association's efforts), things aren't

"The place to look is what happened in the systems market when you made x86-based and hybrid systems commoditized," he says. "Didn't IBM and Hewlett Packard and Dell and others manage to stay in business anyway?"

Rather than going out of business, these big players and others managed to make more money



so bleak for buyers. One would think that if the upper hand has been given to the buyers, the vendors would start to drop like flies. But the dwindling prices of hardware open up a world of opportunity on other fronts, Clabby says.

by shifting the value upward, Clabby says. They moved into the business of infrastructure management, middleware, and services.

"Eventually that's what is going to happen in the storage market.

They're going to realize that it isn't the hardware anymore," Clabby says. "It's shifting the value and making your margin in other places where there's real value."

Where's The Storage Market Headed?

Because the systems market leaders already know how to make money once the hardware becomes commoditized, they are the ones that have driven storage commoditization to give IT managers what they want.

"Systems marketplace is there already. They get it," Clabby says. "The systems vendors that also happen to sell storage—this includes IBM with its SAN file system, Hewlett Packard with its close relationship with Veritas (part of Symantec now), Sun with its own file system—all of these vendors understand and get the concept of being able to pool mixed vendors' storage. Some vendors, though, they don't get it."

This includes the big elephant in the corner, EMC, who Clabby says is not moving into virtualized storage aggressively enough.

"Heterogeneous is almost synonymous with virtualization. Virtualization is about creating pools of resources," he says. "It sort of goes without saying that IT buyers want heterogeneous pools of resources; they don't want to be locked into only one vendor's storage in their virtualized pool because

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Storage Trends

As Innovation Continues, The Storage Market Gets Used To Quick Changes

by Elizabeth Millard

THANKS TO THE NEED for more and more data storage, the industry is bursting with options for purchasing, and the competition is keeping market players busy, too. Major events in storage, such as changing market share for some companies, could have an effect on the field in the near future and drive the development of new types of products. Here's a glimpse at the latest moving and shaking in the storage field.

Managed Storage On The Rise

The creation of more companies as SSPs (storage service providers) has been predicted by analysts recently, but the appearance by such major players has been something of a surprise. Sun, Verizon, and HP have all made aggressive moves in the market, offering utility storage that blends management services with application expertise.

The SSP market wasn't always so robust. Just a few years ago, managed storage was sputtering, and many smaller start-ups had to shut their doors. Enterprises simply didn't want their data sitting in drives at a company they didn't know. But emphasis on security and stability has turned the market around. In 2003 and 2004,

market research firm Gartner reported that only 60% of IT departments would consider managed storage for backups. A similar survey in 2005 revealed a huge jump, with 95% reporting that they were either using a service or considering it.

IBM's Tape Storage Breakthrough

Scientists at IBM noted in May that they had boosted the storage capacity of removable magnetic tape by a magnitude of 15, demonstrating that tape still remains a viable alternative to optical or disk-based storage.

Robert Amatruda, an analyst at market research firm IDC, notes that the development should bring new confidence in the viability of tape storage and should quiet naysayers who claim that removable tape is outdated.

In general, look for IBM to keep chasing its goal of creating better storage products, and happily for small to midsized enterprises, the company is focusing strongly on SME needs. Recently, it enhanced its storage virtualization software, the IBM System Storage SAN Volume Controller 4.1, to fold in new technologies such as a global mirroring function that lets users virtualize

data at locations of greater than 100 miles.

Continuous Data Protection Forges Ahead

For many companies, this could be the year of CDP (continuous data protection), also called continuous backup. The storage system creates a repository of storage snapshots that allows data to be backed up automatically whenever a change is made. The strategy comes in two flavors: either a

doesn't hurt, either, that Cisco is now in the game after acquiring InfiniBand switch company Topspin last year.

Over the past few years, InfiniBand has been embraced by the high-performance computing community in particular, which has appreciated the standard's ability to enable greater scalability and higher performance than previous cluster interconnects, and often at a lower cost.

More efficiency with clusters is considered a big deal by many, considering the promise of grid computing. Grids tie together servers, storage systems, and networks into a

SAS is far greater, as it offers the ability to be leveraged as a fabric. The versatility of SAS provides customers with the ability to take advantage of a new class of storage networking."

The technology sparked more attention recently when LSI Logic unveiled a 1U, 36-port SAS switch that lets users join up to 10 host computers that sport existing SAS or SATA (Serial Advanced Technology Attachment) disks. The company notes that the new switch extends the capability of SAS, going beyond just being a SCSI replacement to becoming an actual fabric infrastructure. This should prove especially appealing to SMEs, says Bruce Grieshaber, product manager for storage at LSI Logic.

"The LSI SAS switch will enable SMEs to take advantage of a cost-effective, scalable, high-performance storage network and move beyond the limitations of DAS environments," he notes.

Storage Teamups For SME Customers

Partnerships for development are rampant in the storage industry, as major players such as Cisco gobble up start-ups or license their technology. But a growing trend is the alignment of high-profile manufacturers that team to create entry-level storage products or systems that will appeal to the very attractive SME market.

A prime example is the recent pairing of EMC with Japanese electronics giant NEC. Under a new agreement, the two will design and manufacture products that could have a major impact on SME-related storage. EMC is already eager to capture those customers and earlier this year unveiled the Insignia line (www.emcinsignia.com), a series of hardware and software products geared toward SMEs.

"Storage has to come in different sizes because customers have very different requirements," says Ken Steinhardt, EMC's director of technology analysis. "We're looking toward making products for SMEs that are expandable and affordable."



backup application offered by a company such as EMC or disk-based backup. With both methods, a device is inserted between hosts and a company's data stores that keeps track of changes without affecting network speed.

Because this removes the hassle of manual backup, more companies—and particularly SMEs—are going to start adopting the technology, notes Steve Duplessie, senior analyst and founder of research firm Enterprise Strategy Group. "CDP is able to dramatically improve recovery, compared to traditional, incremental backups," he says. "For that reason, demand is going to grow, and CDP will find its way into more SMEs."

InfiniBand In The Limelight

The recent introduction of native InfiniBand storage systems has led many to speculate that the development eliminates the need for Fibre Channel-to-InfiniBand bridges and gives the technology a much-needed boost for resurgence. It

centralized, virtual system, and InfiniBand's advocates claim that the standard is key in this process because its architecture defines a network for interconnecting systems into an easily managed environment.

Enthusiasts don't see widespread migration to InfiniBand in the data center yet, but in the near future, it's likely that more vendors such as Xirant, Isilon, and Engenio will increase product development, giving the technology more of an impact in the marketplace.

SAS Continues Marketshare Increases

Serial Attached SCSI storage, known as SAS, has been garnering more traction in the market and is expected to make further inroads in the near future.

"As Ultra320 SCSI reached its limits, SAS emerged as the next generation technology for DAS environments," notes James Opfer, a vice president at Gartner. "However, the opportunity

New Innovation

A trend in storage will always be the development of new, fresh technology. Here are some recent advancements that could make a mark soon:

- Hitachi Maxell** (www.maxell.com) noted that it's developed an ultrathin DVD that's 1/13 the thickness of a conventional DVD, making for more compact storage. Capable of accommodating a terabyte of data, the DVD will be mounted on a special cartridge that supports next-generation optical discs.
- Sun Microsystems** (www.sun.com) has launched Project Honeycomb, which allows a storage application to retain and index metadata about unstructured data. The technology should make it easier to find information about digital images or videos through the use of keywords.
- InPhase Technologies** (www.inphase-technologies.com) announced it has put 515GB of data into a single square inch of holographic media. The development could have an impact on data storage because the accomplishment is a milestone in storage density, according to research firm IDC. Unlike other technologies that record data bit by bit, holographic technology can store and read up to a million bits of data with a single flash of light.

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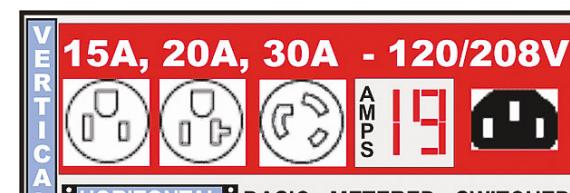
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The Cutting Edge Of Storage

Continued from Page 1

controller, which controls the movement of data among drives; and the Brick, which contains up to 32 storage enclosures for the storage pool itself.

The result? A unified system that can manage up to 384TB, and one that can greatly reduce the inherent risks of ILM, which demands that data be shuffled from tier to tier (even device to device) based on its age. New data goes to the best and fastest machines, while old data is shunted to machines with slower performance.

"Anytime you move data from one platform to another, from one resource to another," says Kennedy, "there's an element of risk. We minimize the risk by doing it all on a single platform."

BiTMICRO: The Future Is Solid State

Pry open most hard drives, and you'll see the same thing: Platters (the spinning discs) under a spindle (the arm that reads and writes data) in a hard outer shell.

But not SSD drives. Short for solid state disk, SSD is a cheetah-fast device that contains no moving parts but instead has memory boards (often DRAM), a bus, and an onboard CPU. The result? SSD offers the highest I/O rates in modern storage, which can make all the difference in mission-critical apps with lots of random access.

"Even though drives over the last 15 years have made quantum-leap progress, doubling every year and a half or so, they can only spin up to a certain performance," says Marius Tudor, BiTMICRO's (www.bitmicro.com) director of new business development. "So you're still going to have the mechanical latency and seek time that is built-in with every one of the devices."

That's where SSD products, such as BiTMICRO's 2.5- and 3.5-inch HDD (hard

disk drive) and 19-inch rackmount options, can shine. "You're talking about eliminating the seek time and latency and gaining microseconds in access to data," says Tudor. "So even at a 3.5-inch device, that will still give you about 40 microseconds. That's about 100 times faster" than a spinning hard disk.

It's not the only benefit of SSD, either. These drives are inherently rugged, resisting damage from shakes and tremors. "When you decrease the moving parts," says Tudor, "you go to five-nines plus."

You also consume less power than a standard hard drive, meaning you spend less on cooling. And you can erase your drives quickly, without the need for special software. (According to Tudor, one memory board can be erased in six seconds, give or take, meaning a 70GB drive can be sanitized in roughly 20 seconds, all at NSA and DoD levels.)

The drives are also plug and play and OS-independent, making them, in Tudor's words, "better than anything that spins."

3PAR: To Each According To Need

You've heard of, and may even use, utility computing in your data center. It's a simple model that lets your apps grab processor time from a shared pool when they need it.

It also works for storage, and Fremont, Calif.-based 3PAR (www.3par.com) is pushing its limits. Its Utility Storage line has virtualization and clustering features that maximize capacity, but it also boasts a strategy called Thin Provisioning, which is built-in to its InForm OS.

In traditional (or "fat") provisioning, apps are given far more storage space than needed, so they have breathing room to grow. It's a convenient, if not efficient, technique; according to 3PAR, most companies

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use only 25% of the space they've allocated to applications.

Not so with Thin Provisioning, which lets you assign a logical capacity (that is, its maximum potential need) to an application yet only draw physical capacity from a shared storage pool when that capacity is truly needed. Thus your apps can use the storage pool sparingly, leaving you with extra dollars from the hard drives you won't have to buy.

Isilon: Taming Unstructured Data

In the five years that Sujal Patel spent at RealNetworks, he received a world-class education in exponential data growth. "The real problem that I was seeing in 2001 was the fact that unstructured data and digital content," such as mountains of research, video, or simply the heaps of Word and Excel docs that plague most companies, "have an exploding amount of data," he says. "Traditional storage architectures have always been built with a monolithic architecture." According to Patel, that architecture can't scale to meet the needs of today's data-intensive enterprise.

Patel, now the founder and CTO of Isilon Systems (www.isilon.com), was also witness to a second trend: the rise of clustered computing. Clusters join computers together to act as one, harnessing their power for parallel processing. Patel felt that clusters could be applied to storage to solve the problem of rampant unstructured data growth. Isilon was born from that single—and some would argue singular—notion.

"The product that we've created essentially breaks the old model of storage," says Patel, "and instead harnesses the power of a cluster and combines all those resources together into one very powerful system."

As in a cluster, the basic unit of Isilon's IQ system is called a node. Here, it's a self-contained 2U appliance. Customers can purchase three, five, or 20 nodes—as many as they need, based on the size of their data

sets—and seamlessly scale their system as their data mushrooms. What's more, each node includes its own processor, and IQ relies on a homegrown file system named OneFS to distribute files across the cluster. As a result, Isilon's IQ does something that no other storage solution can boast of: As it grows larger, it can also grow faster, scaling performance with size.

Just how much size? In its current incarnation, IQ can handle up to 528TB. That's why data-intensive companies, such as Kodak, have used it. (Kodak uses Isilon IQ to run its online EasyShare Gallery, formerly Ofoto.) But smaller companies can benefit from IQ's intelligence, too. Patel notes that an array of midsized firms, including post-production firms in Hollywood (that is, firms with massive amounts of data in the form of raw video), have deployed Isilon.

Hollywood's glitz may be a far cry from the daily routine at your company, but smart technologies such as Isilon's, not to mention the cutting-edge strategies of Pillar, BiTMICRO, and 3Par, can hit close to home in solving your storage needs. □

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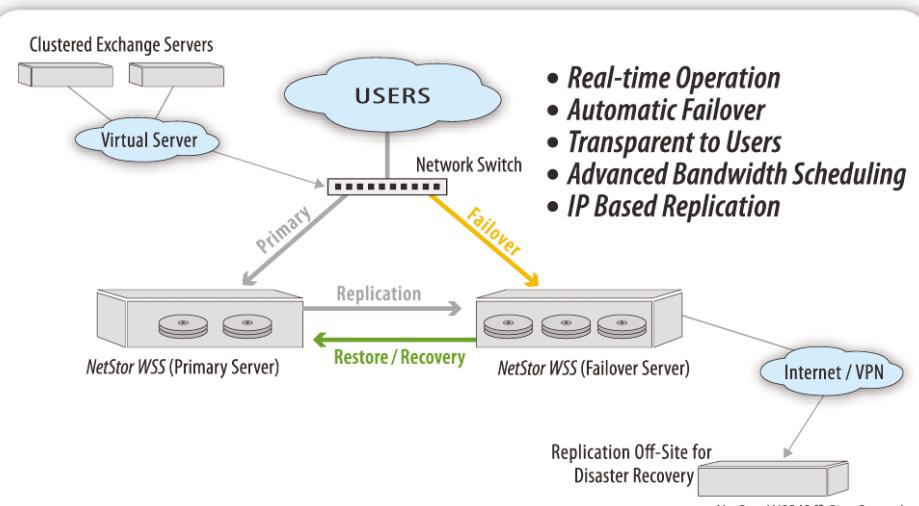
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Simulating Network Traffic

Continued from Page 1

application will perform in the real world, the lab must reproduce "real-world" conditions as closely as possible. That includes dropped packets, jitter, bandwidth restrictions, and latency.

It is possible to devise a lab environment that might reproduce some of these WAN complications. By establishing lab sites in geographically disperse locations, you could attempt to verify system or application functionality over the WAN.

DC Palter, president of Apposite Technologies, says, "IT managers can test on the actual WAN. But this can be difficult to set up, especially for long distance tests, and potentially disruptive. The results of live testing are difficult to replicate, and it is impossible to test worst-case scenarios."

Frank Puranik, CTO and director of Itheon's Networks Division, suggests that the actual production network WAN could be used after hours. "You could try

to conduct application testing over the live WAN [during] out-of-office hours. The problem is that most live networks are actually busy (or even busier) at night as the company performs network backups, etc."

Another alternative Palter offers is simply not testing the WAN functionality. He says, however, that "this is often the cause of disappointing performance, unstable performance, and customer dissatisfaction."

Employing A WAN Emulator

To re-create WAN conditions in a lab environment, you can use a WAN emulator. A WAN emulator is a device that lets administrators simulate adverse network conditions that typically exist on a WAN or even within a LAN environment, so applications and systems can be tested under worst-case scenario conditions to predict how they will function on the production network.

Itheon's Puranik says, "A [WAN] emulator enables a company to

realistically re-create the conditions of their existing (or proposed) IT network in a safe offline environment. It is then possible to test the performance of new (or existing) applications in this replicated network, safe in the knowledge that they are not going to bring down the company's live production network which will be hosting mission-critical applications and services."

A WAN emulator can be used to re-create and test a wide range of functions or scenarios including testing and planning prior to rolling out new equipment or applications, creating what-if or worst-case scenarios, or performing capacity planning.

Palter explains some further uses for a WAN emulator appliance. "Developers and QA teams at any company that produces software or equipment designed to run over the WAN or be managed remotely should use a WAN simulator to test the performance and stability of their product in-house

under the full range of network conditions that their customers experience. Low bandwidth links to telecommuters, long latency links to remote offices, or highly congested links in developing regions can all impact the performance of network-based applications. Developers should test all of these conditions before customers complain, and it is much easier to change a few settings on a WAN emulator than to set up a large number of real WAN links for testing."

Even geographically dispersed companies are moving to centralized, or at least regionalized, data centers. Aggregating equipment at a single site makes administration and maintenance easier, but companies need to ensure that the end users will not suffer an unacceptable loss of performance or availability of data or applications that they must communicate with across the WAN. A WAN emulator appliance is not a cheap investment, but compared with the money lost to troubleshooting and repairing a flawed implementation or the loss of productivity created by

not fully testing before deployment, the investment can be quickly recovered. □

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What Can A WAN Emulator Do?

It is easy for a server and a desktop to communicate across a single LAN segment sitting in the same room in a lab environment. But that is not a valid test of how that same client machine might have trouble communicating across the country or around the world with a server sitting in a data center once the application is deployed.

A WAN emulator can be used to re-create real-world network issues to test and predict how applications will behave on the production network. Here is a brief list of the types of network conditions that can be reproduced:

- Bandwidth constraints
- Delays to traffic such as network latency or jitter
- Dropped packets or corrupted packets
- Traffic prioritization and shaping for QoS
- Multiple router hops

WAN Emulator Devices

A number of appliances are available to help companies of all sizes produce realistic network conditions to test and predict how systems and applications will behave under certain conditions. Here are products from four of the WAN emulator leaders.

Vendor	WAN Emulator	Web Site	Price	Features
Apposite Technologies	Linktropy 4500	www.apposite-tech.com	\$2,500 to \$10,000	Provides ease-of-use in an affordable appliance; produces accurate network conditions and has a monitoring capability to graphically visualize network performance
Itheon Network Technologies	Itheon Network Emulator	www.itheon.com	Starting at \$20,000	Offers a solid price-to-performance ratio, with high-end features and functionality at less than half the price of its high-end competitors; all-in-one price takes confusion out of the cost
PacketStorm Communications	PacketStorm 4XG	www.packetstorm.com	Starting at \$49,000	Over 64 million packets per second throughput; up to four 10Gbps or 32 1Gbps ports can be installed in one chassis
Shunra Software	Shunra Virtual Enterprise 4.5	www.shunra.com	\$70,000	The most expensive of the devices listed; lets administrators use live network traffic as a baseline for emulation, providing a truer view of the network and purely theoretical or analytical models

Commodity Commotion

Continued from Page 9
they lose their advantage of being able to leverage one vendor against the other. EMC's lack of aggression in storage

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virtualization shows me they don't get it."

He believes that if companies such as EMC are not able to get with the program, they are going to find it increasingly difficult to hold a solid position in the storage market. Because as competitors make it easier for businesses to manage storage with fewer and lesser-skilled individuals, they will be the ones that customers approach when building out their storage infrastructures.

"I think those companies are going to start to kick butt," Clabby says.

The numbers back up Clabby's view on where the market is headed. Though EMC is still entrenched atop the external storage hardware market, research firm Gartner reported that in 2005 EMC's share of the market remained relatively stagnant relative to 2004 statistics, while IBM, Sun, and others grew in their share of the spoils.

What This Means To The SME

So what does all of this market analysis mean to the typical IT manager? According to Clabby, it is going to be easier to manage storage and ensure that the department isn't guessing when it comes to storage.

He says that where most businesses are right now is that they are just beginning to

The SNIA's Storage Management Initiative

The SNIA (Storage Networking Industry Association) has been a major force in driving the move to a more heterogeneous storage environment. This cooperative industry organization is made up of representatives from key storage vendors and users.

One of its biggest projects has been the SNIA SMI (Storage Management Initiative), which was designed to develop and standardize interoperable storage management technologies and promote them to end user and storage networking communities. Last year the group expanded the initiative's reach and accelerated activities to promote SMI. It was then that the group released the second iteration of its standards document, which included improved functionality in configuration, provisioning and trending, event management, data protection, and asset management.

Visit www.snia.org for more information.

take advantage of the state of the market to consolidate their storage assets.

"Right now where the market really is in, is consolidation," he says. "We've got a lot of storage out there; it's all over the place, with underused storage arrays [and] overutilized storage arrays. We've got to balance and consolidate, and [most people] know it."

Statistic

According to Gartner, the network-attached and unified storage market will reach \$2.2 billion in 2009.

Once businesses are able to consolidate, the next step is really in virtualization, he says.

"The next thing you do is you virtualize so that you find and control and pool any

unused storage, so that also increases your utilization, but it also lowers your management cost because now you can manage and find stuff, and you don't need the high level of expertise you needed before," he says.

And then the final frontier is provisioning. Currently an expensive prospect for businesses, and usually out of reach for smaller businesses at the moment, it will become more possible as vendors shift their focus to storage management.

"[Provisioning is] where you build up and tear down your storage environment according to the different demands from your systems and applications and databases," Clabby says. "That is a management activity, and it's complex, and you have to pay very expensive people to do that now, but if you can automate it, then that's the next logical step." □

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"Saving space, time, and expense for spot cooling has become essential for many businesses with critical equipment operating in confined spaces with no ventilation or air conditioning," according to John Doran, manager of the MovinCool Department. "MovinCool pioneered the concept of workspace spot cooling with its portable units," Doran adds, "and now, with the CM12, offers an out-of-the-way ceiling-mount solution that will certainly save our customers time and money, as well as space."

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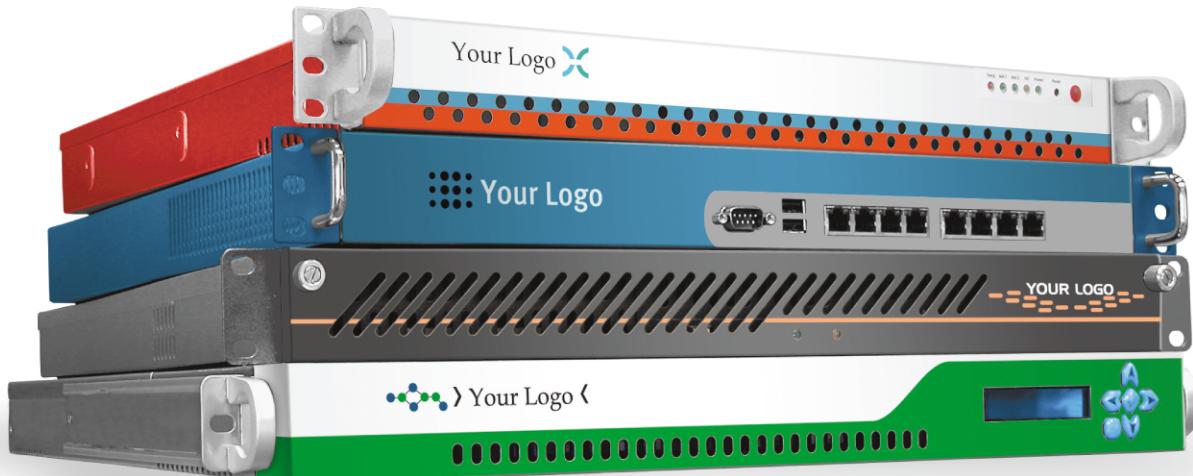


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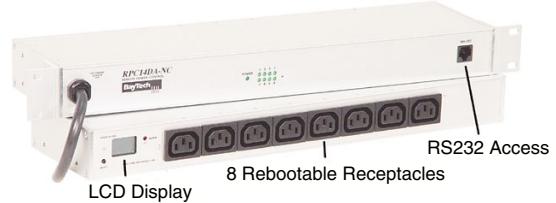
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Product Releases

PHYSICAL

COMMUNICATIONS

Cable Management

■ **Select** released new versions of its T3 cross-aisle panels, which have optional movable LED strips that let administrators identify circuits. They have BNC connectors and cable management rings. Users can put LEDs and cross aisle connections on the front or back of the rack. The version that includes the LED strip consumes 5.25 inches of vertical rack space (three-rack units), while the LED-free version consumes four inches of vertical space.

Power Distribution

■ **APC** unveiled the Mobile Power Pack, an ideal choice for providing additional power for mobile users with devices such as mobile phones, PDAs, BlackBerrys, and Treos. The Mobile Power Pack has a small footprint (smaller than a deck of cards), making it convenient to take on the road. APC claims the device's lithium polymer battery cell can provide power to a smartphone for eight to 10 hours. The Mobile Power Pack also has an AC-to-USB power adapter and a USB-to-Mini B power cable. It is available for \$69.99.

Cluster Networking

■ **Voltaire** introduced an InfiniBand-based switching solution and software stack that supports Microsoft Windows Compute Cluster Server 2003. Packaged as a part of HP's Unified Cluster Portfolio, Voltaire's InfiniBand hardware delivers multiservice switches with built-in Gigabit Ethernet, Fibre Channel, and InfiniBand connectivity. Voltaire's OpenFabrics stack for Microsoft Windows is also included with the new offering. Ideal for high-performance computing applications, Voltaire claims its switching and software solutions bolster Windows-based clusters' performance and scalability to boost application performance.

Network & Systems Management

■ **NetScout** introduced the nGenius Application Fabric Monitor, which can simultaneously gather performance-related metrics and provide both real-time and historical reports. It also monitors and records full-packet streams and distributed packets for later analysis. nGenius Application Fabric Monitor provides deep packet-level visibility for a company's network.

nGenius also uses onboard processing for more efficient operation and data transfer. nGenius Application Fabric Monitor includes dual processors, RAID-5 storage with hot-swappable drives, dual drives for the OS, and redundant hot-swappable power supplies. The nGenius Application Fabric Monitor is available with either 5TB or 8TB of onboard storage. Pricing for the 5TB configuration starts at \$79,995.

Security

■ **Aventail** introduced an addition to its family of secure remote access appliances. The Aventail EX-1600 utilizes the latest in hardware design and is a pure network appliance. It features a small footprint, lightweight chassis, front panel LAN ports, and controls for rack mounting and ongoing management. Designed specifically for the midrange market, the EX-1600 supports 25 to 250 concurrent users.

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■ **McAfee** announced new features for its Secure Messaging Gateway and Secure Internet Gateway appliances. The features include an email compliance module to help protect sensitive customer information. The compliance module allows companies to ensure they comply with various regulations including HIPAA, Gramm-Leach-Bliley,

and Sarbanes-Oxley. At the center of the compliance module is the PostX HIPAA and Privacy Lexicons, which are endorsed by the American Hospital Association. The module looks for personal information in outgoing emails (such as social security numbers and driver's license numbers). When the module detects personal information, it can perform one of several options: It can prevent the message from being sent, or it may pass the message to a third-party encryption product before being sent. A new reputation filter for incoming email, powered by the Postini Threat Identification Network, also helps reduce the amount of incoming spam. The filter checks the IP address of incoming messages. If the message has a "bad reputation" derived for sending lots of spam, it's rejected.

....

■ **Network Engines** announced the NS9200 Enterprise Security Appliance, which integrates Microsoft ISA Server 2004 Enterprise and Websense Web Security Suite to offer protection from threats and to optimize the use of bandwidth. The NS9200 includes security tools, caching capabilities, content screening, and central policy management. The NS9200 aids in protecting Microsoft environments

Go to Page 17

Verari Expands 4Gb Fibre Channel Lineup

VS4000 Series Offers Reduced TCO For Midrange Users

by Joseph Pasquini

....

ON THE HEELS OF its successful VS7000 4Gb Fibre Channel flagship storage system last year, San Diego-based Verari Systems has introduced the VS4000 series, a new full 4Gbps end-to-end Fibre Channel storage solution specifically aimed at the small to mid-sized enterprise marketplace. The midrange VS4000 is also targeted

at those businesses running HPCC applications that require simultaneous I/O along with high performance bandwidth.

Verari produces two models of the VS4000: The VS4200 features 2GB of cache and four host ports; the VS4400 features 4GB of cache and eight host ports. Each of the two models can concurrently support both Fibre Channel and SATA II drives side-by-side

within a single 3U enclosure. The VS4000's dual RAID controllers, which support levels 0, 1, 3, 5, and 0+1, provide for a maximum SATA II capacity of 8TB within a 3U chassis.

"Additionally, there is a unique interface card within each SATA drive carrier that enables SATA II drives, with a native 3Gbps interface, to run at 4Gbps Fibre Channel speed," says Eric Seidman, Verari's storage systems manager. "This unique capability allows the 4Gb drive module to run at full bandwidth when intermixed with

4Gbps FC drives and 3Gbps SATA II drives, ensuring maximum performance at a lower price."

For those shops requiring even more disk storage, each of the two models can scale to 56TB of physical disk capacity using up to six of the Verari VSEM 3U storage expansion modules. For high system availability, the VS4000 series offers redundant, hot-swappable storage controllers, disk drives, power supplies, cooling fans, and cache batteries.

Similar to the other members of Verari Systems VS product lineup, the VS4000 series is managed via the company's SANtricity Storage Manager software. SANtricity supports Windows Server 2000/2003, NetWare, AIX, Solaris, Linux, HP-UX, and IRIX.

In the 4Gb SME arena, Verari faces competition from several other well-known storage vendors. The CLARiiON CX500 from EMC (www.emc.com), for example, can scale up to 64TB in a 25U footprint. Hitachi Data Systems' AMS500 (www.hds.com), which supports clustering and active-active failover, can scale to 86TB. Seidman contends,

however, that the VS4000 offers the most economical alternative for SMEs looking to lower their total cost of ownership. "When it comes time to upgrade, the VS4000 will allow the customers to protect much of their investment in storage devices and permit them to grow upon this VS4000 investment when requiring the full power, capacity, and capability of the VS7000-class products," says Seidman. Just as with the EMC and HDS solutions, storage subsystem upgrades on the VS4000 can be performed in place with data intact. **P**

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Product Releases

Continued from Page 16

from threats and protects applications such as Exchange Server, SharePoint Portal Server, and Internet Information Services. Network Engines has also included its NEWS (Network Engines Web Services) for configuration, hardware-monitoring, and deployment. The NS9200 is priced at \$16,495.

Server

■ **Hummingbird** launched its RedDot Content Management Server 7.0 and LiveServer 2.5 to help businesses manage, edit, share, reuse, and control content on corporate Web sites, intranets, and extranets. Built on the .NET framework, the latest version of RedDot CMS now includes advanced archiving capabilities and asset analysis tools. Hummingbird's RedDot CMS 7.0 and LiveServer 2.5 are aimed at medium-sized businesses.

Storage Networking

■ **McDATA** released its 4Gbps McDATA 6140 Director, a storage networking tool that provides data access to 4Gbps devices and between switches. Director protects existing SAN investments with support for multiple data movement including 1, 2, 3, 4, and 10Gbps. Customers can move to a faster speed in 4-port increments. Customers who have 2Gbps 6140 Director can upgrade to the

4Gbps 6140 Director with a nondisruptive HotCAT firmware upgrade.

• • •

■ **MPAK Technologies** introduced a high-capacity, budget-priced line of NAS filers. The new MPT3000 series of filers extends its current line of Velocity NAS filers. The new MPT line provides up to 6TB of raw storage capacity and delivers throughput in excess of 1,000MBps.

Telephony

■ **Intel**'s new 600SM PCI Phone Adapter is a PCI card that allows you to use a traditional analog phone with VoIP services from engin, Packet8, Skype, and yak. Using the adapters, businesses can convert to VoIP without buying special equipment. The 600SM is part of Intel's new vPro line, which offers new desktop PC features for business users.

Wireless

■ **Nortel** introduced several new products, including the Business Access Point 120 for easy-to-configure, secure wireless data and voice access. Nortel also released Business Element Manager for network management and automation of repetitive tasks, Business Communication Manager 4.0 for ad-hoc conferencing of up to 40 participants and improved voice-enabled WAN support, the Business Ethernet Switch 100 Family for connecting and

powering devices, and the Business Secure Router 222 for cost-effective networking.

END NODES

Mobile

■ **WinBook** introduced the WinBook T230 14-inch widescreen performance notebook. This \$1,299.99 notebook uses Intel Centrino Duo Mobile Technology with a T2300 mobile dual-core Core Duo processor running at 1.66GHz and 1GB of DDR memory. It also has a 120GB 5,400rpm hard drive and dual-layer DVD±RW drive. This laptop weighs 5.4 pounds and measures 1.0 x 12.95 x 10.75 inches (HxWxD). Integrated WiFi connectivity (802.11a/b/g wireless), Intel 10/100/1000 Gigabit Ethernet, and 56K modem are also standard.

Projector

■ **Sharp** announced new DLP and LCD projectors. The XG-MB67X is a DLP Conference/Classroom series projector with 3,000 ANSI lumens brightness and an RJ-45 Ethernet port. Elsewhere in the Conference/Classroom series are the LCD XG-C330X and the XG-C430X (3,000 to 4,000 lumens) with optional lenses. All three projectors offer XGA resolution.

Server

■ **IBM** unveiled the DB2 9 data server named Viper. DB2 9 manages XML and

relational data with pureXML technology, Venom storage compression, and autonomic data management. The server also accesses data stored on Oracle and MySQL databases. pureXML technology manages relational data and XML data without requiring the XML data to be reformatted. Venom storage compression allows administrators to use row compression to compress data objects. Viper's features include security with Label Based Access Control, disaster recovery, data partitioning, and automatic memory management. The DB2 Developer Workbench is used with the Viper server to help create, edit, debug, test, and deploy DB2-stored procedures and user-defined functions.

• • •

■ **Verari Systems** announced the support of Microsoft Windows Compute Cluster Server 2003. Verari Systems' line of high-density blade server clusters will now be able to provide customers with updated support and features designed to enhance their experience during rapid node deployment, cluster configuration, monitoring, and policy-based scheduling.

Storage

■ **Addonics Technologies** released the Jupiter hard drive enclosure line, which will safely house any 2.5-inch IDE HDD with a height less than 10mm. The enclosures

Go to Page 18

Tape Backup Gains Encryption

Spectra Logic T950 & T120 Libraries Offer Enhanced Security

by Ed Tittel

• • •

IN A STEP sure to please security-minded corporate executives and IT professionals alike, Boulder, Colo., storage and data protection company Spectra Logic recently announced it had integrated hardware-based, U.S. government-approved AES-256 encryption to its high-end Spectra T950 and Spectra T120 tape library units. Spectra libraries can write backup data both to LTO (Linear Tape-Open) and hard disk storage

devices. Spectra libraries that feature the company's BlueScale Encryption let companies make encryption a part of the backup process without having to change their backup policies or add any additional hardware or software.

Two editions of the Spectra Logic BlueScale Encryption are available. The Standard edition supports multiple layers of security, including multiple passwords to access key import and export function, quorum (m-of-n shares), and role-based authorization.

Libraries can apply multiple keys to the library files simultaneously, offering more flexible and powerful security. The Professional edition includes all the features of the Standard offering but includes hardware-based compression, which reduces storage media and backup time requirements by half as compared to backing up with encryption only.

BlueScale Encryption features a single user interface for both encryption and tape library management. A Web-based Remote Library Controller lets administrators manage those activities from any network-attached desktop. BlueScale Encryption is vendor-



SNAPSHOT

Spectra Logic T950 & T120

Standard Edition: \$2,500
Professional Edition: starts at \$12,000

Standard Edition provides encryption of data during backup (decryption during restore), plus key management; Professional Edition includes all standard features and functions, plus hardware-based data compression

www.Processor.com/SpectraLogic4

and platform-neutral and compliant with all major backup applications, including those from Acronis, Altiris, BMC, CA, Dantz, EVault, and many others. Major customers include SBC,

Cisco, Bank One, Hitachi, the Internal Revenue Service, Tupperware, and the U.S. Army. Tom Dixon, information systems manager at Advanced Micro Devices, says of the BlueScale Encryption offering that "our Spectra library with encryption integrates secure library encryption and easy-to-use key management. . . . AMD can back up and encrypt data in a single step."

Though no other commercial backup offerings currently include the kind of hardware encryption and compression that Spectra Logic introduces with its support for BlueScale Encryption, the primary competitors for this market niche include major system vendors such as IBM (www.ibm.com), Dell (www.dell.com), and HP (www.hp.com), as well as well-known storage/backup hardware vendors such as ADIC (www.adic.com), Qualstar (www.qualstar.com), Dynamic Solutions International (www.dynamicsolutions.com), and Overland Storage (www.overlandstorage.com). □

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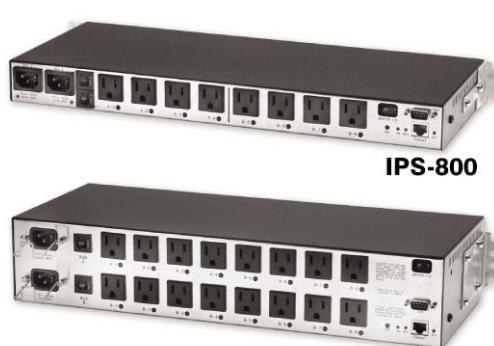
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Dual Power Inputs

NBB-1600

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Product Releases

Continued from Page 17

feature an anodized aluminum exterior to provide rugged protection in hazardous environments. Customers can also add hardware encryption with Jupiter Cipher, Addonics' encryption technology. Jupiter Cipher requires no software installation or a password. Users insert a cipher key into the enclosure to activate and deactivate its encryption. With an optional drive cradle, the Jupiter enclosure fits in a 3.5-inch drive bay as a hot-swappable drive cartridge or IDE removable hard drive.

■ **Seagate Technology** announced the Savvio 10K.2 and Barracuda ES drives. Seagate's Savvio 10K.2 second-generation 2.5-inch enterprise class disc drive uses less power than its prior generation and offers 1.6 million hour Mean Time Between Failures reliability and up to 146GB capacity. The Savvio 10K.2 uses perpendicular recording for added performance and comes with either a 3Gb SAS or 4Gb Fibre Channel interface. The Barracuda ES has SATA capacities up to 750GB and features RVFF (Rotational Vibration Feed Forward) technology. The Barracuda ES uses perpendicular recording technology and comes in a 3Gb SATA version with NCQ and 8/16MB cache. It also comes in a 2Gb FC version in capacities of 40GB and 500GB. Seagate Technology also announced three families of 2.5-inch notebook PC hard drives built on perpendicular recording technology with capacities up to 160GB. The Momentus 5400 PSD drive combines a high-performance hard drive and flash memory into a single hybrid device. This drive duplicates the most commonly used hard drive data onto a 256MB nonvolatile cache to provide faster bootup and resume, lower power consumption, greater reliability, and higher performance. The Momentus 5400.2 FDE provides an easy, cost-effective way to prevent unauthorized access to all notebook PC data. This drive's hardware-based full disc encryption securely performs all cryptographic operations and key management within the drive. Momentus 7200.2 has a 7,200-rpm spin speed, 8MB of cache, and up to 160GB of capacity in a 2.5-inch

notebook hard drive. Momentus 5400 PSD, Momentus 5400.2 FDE, and Momentus 7200.2 are scheduled to ship in the first half of next year.

Components

■ **Advantech** introduced the PCI-1612AU, the company's latest 4-port PCI communication card. It offers transmission speeds of up to 921.6kbps and is compatible with the PCI 2.2 bus specification. The card reduces the CPU load and enhances platform stability thanks to its high-performance 16PCI954 UARTs (universal asynchronous receiver-transmitters) with a 128-byte FIFO (first in, first out). It also has universal PCI connectors that are compatible with traditional 5V signaling systems or the newer 3.3V systems. The PCI-1612AU starts at \$195.

■ **AXIOMTEK** unveiled the eBOX748-FL, a fanless, rugged, embedded system. Ideal for tasks such as POS, ATM, DSA, building automation, department store screens, and kiosks, the eBOX748-FL offers low power consumption and is capable of running Windows or Linux Embedded OSes. It also includes the following features: a 1.4GHz Intel Pentium M CPU, four COM ports, four USB 2.0 ports, LPT port, PS/2 port, VGA connector, and a CF slot. The eBOX748-FL also has a Mini PCI slot to give the embedded system WLAN connectivity. The antivibration 2.5-inch HDD bay adds another layer of safety.

SOFTWARE

Application & Web Development

■ **AVIcode** has released the AVIcode TFS Incident Management Connector. This product lets Microsoft Operations Manager 2005 communicate with the Visual Studio 2005 Team Foundation Server. The management connector supports Microsoft's DSI (Dynamic Systems Initiatives) by integrating Operations Manager 2005 alerts as work items in the Team Foundation Server. The TFS Incident Management Connector lets developers automate communication needed to manage application issues, and

Centrally Manage Your SME's Secure Data

Ingrian i110 DataSecure Platform Ensures PCI Compliance

by Cindy Lazzaro

ENCRYPTION IS PLAYING a bigger and bigger role in data communications. But encryption technologies can be difficult to implement correctly and costly—not only in the burden placed on network hosts and adapters to perform the encryption and decryption but also in maintaining the digital certificates or encryption keys.

Devices available to manage, store, and protect encryption keys can be very costly, out of the reach of many small to midsized enterprises. Yet SMEs have as much need for these safety measures as larger corporations.

To help SMEs meet regulatory requirements and ease management of a public-key infrastructure, Ingrian Networks introduced its i110 DataSecure Platform, an entry-level appliance designed to let security managers centrally manage and control encryption keys. The Ingrian i110 is a hardened appliance that centralizes all cryptographic processing, key management, logging, auditing, and security policies. Encryption can be enabled for Web servers, application servers, and databases and uses Ingrian's patent-pending cryptographic software.

The i110 is capable of processing 11,000 cryptographic operations per second, and

Product Releases

thereby more easily resolve application problems such as performance bottlenecks and coding errors. The new connector integrates seamlessly with AVIcode's .NET Management Pack, which lets Microsoft Operations Manager 2005 users enable custom health monitoring of applications based in the .NET framework.

Business Productivity

■ **Microsoft** introduced the latest version of its Dynamics AX global business-management software package. Dynamics AX 4.0 helps medium-sized and large businesses with enterprise resource planning, financials, customer relationships, business services, human resources, and supply chain processes. The new version adds Web services and support for RFID applications. Dynamics AX also includes an adapter for BizTalk Server 2006, which lets users access other line-of-business applications, all within a familiar Microsoft-style interface.

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■ **Ultimus** released Ultimus Dashboard For Microsoft SharePoint. The software creates a report from business and process data. Its features include end-to-end process monitoring and an intuitive report creation interface. The Dashboard also supports SharePoint portal pages and lets users customize it to their needs. The software supports the Ultimus Business Process Management suite.

Database & Data Mining

■ **Managed Objects** released CMDB360°, a configuration management database software. CMDB360° has over 60 integration points that help generate a federated CMDB (Configuration Management Database) from IT configuration data and service models. The CMDB360° draws configuration data from multiple vendor sources and reconciles any duplicate configuration items. Automated CMDB synchronization provides customizable end-to-end service views so users in different roles can see and assess the risk of change. Advanced analytics work with a Service Catalog to help users understand their IT infrastructures and services.

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■ SQL Server backup and recovery has a tool in **Red Gate's** SQL Backup Pro 4.5. It's designed to speed up backups and make them smaller. The scalable software supports 64-bit servers, remote management, and 256-bit AES encryption. The software can even make migration to SQL Server 2005 easier.

Network & Systems Management

■ **AdventNet** announced the release of OpManager MSP Edition. This software was designed to give MSPs (managed services providers) the ability to offer a wider variety of network services including monitoring for servers, firewalls, exchanges, and routers. OpManager MSP uses a probe-server architecture that uses a secure HTTP connection and requires no firewall configurations from clients. This software also features graphical reports, rebranding, and upgrades for n-able, level platforms, and Kaseya customers. The probes in OpManager MSP Edition can monitor any number of devices. You can buy this program for a one-time fee starting at \$299.

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■ **Altiris** announced updates to numerous IT asset management products. With the PeopleSoft Foundation Suite, IT organizations can control IT costs for licenses; hardware and service; help ensure compliance with software license agreements and regulations including Sarbanes-Oxley, FISMA, HIPAA, and Gramm-Leach-Bliley; optimize IT asset investments; and more. Other updated products include Application Metering Solution software, Asset Control Solution software and Altiris Contract Management Solution software, and Barcode Solution software.

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■ **Ecora**'s Ecora Reporter And Auditor for VMWare includes 28 premade report templates that let administrators quickly customize reports. Reports include information such as ESX security settings and information about virtual machines including permissions, files, volumes, and summaries. The software installs on a single PC and can provide information on connected systems. In addition to VMWare, Ecora Reporter And Auditor can also provide

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SNAPSHOT

Ingrian i110 DataSecure Platform

Starts at \$15,000

Delivers encryption capabilities to specific locations in a company

www.Processor.com/Ingrian

by adding additional appliances, the i110's load balancing capability boosts scalability and performance. The DataSecure Platform is composed of three components: the DataSecure appliance, a dedicated hardware product; the NAE (Network-Attached Encryption) Server, which runs on the DataSecure appliance; and the Ingrian NAE Connector, a software provider installed on the Web server, application server, or database that interfaces with the DataSecure appliance.

The Ingrian i110 allows for the separation of administrative action so different administrators can be responsible for different components. The product also provides multifactor authentication and access control between databases and servers and the appliance, preventing unauthorized users

from accessing the appliance or modifying the security policies. The capability to place constraints on user operations based on specific key permissions is also included in the authorization process. It also supports a variety of encryption algorithms from RSA to Triple DES and even the newer AES cryptographic algorithm.

Utimaco Safeware (www.utimaco.us) has CryptoServer, a dedicated encryption appliance. However, rather than running on a black box, the CryptoServer is a security module running on a hardened Linux system. The CryptoServer (security processor) Linux communication module server provides basic security functionality and can be extended by adding application-specific function modules for customer applications. While Utimaco's device also provides support for all the major encryption algorithms, the application security component is an add-on module, as are many of the other functions that are already built into the i110 DataSecure Platform. This makes Utimaco's product more difficult to manage and configure for smaller businesses.

Decru, a division of Network Appliance, has a product called Lifetime Key Management 3.0 appliance (www.decrum.com) that manages encryption keys within stored data. The estimated cost is speculated to be about \$500 per gigabyte, which can easily drive the price beyond Ingrian's fixed-price appliance. □

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MB770

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Product Releases

Continued from Page 19

information about Windows, Exchange, SQL Server databases, Active Directory, HP-UX, AIX, Solaris, Red Hat Linux, Novell NetWare servers, Oracle databases, Citrix, IIS, Lotus Domino servers, and Cisco routers. Free trial versions of Ecora Reporter And Auditor are available. Ecora also released Ecora Documentor, a free utility for network administrators. The software installs on a single Windows workstation and collects information from virtually every network-connected device. Users can save reports in either HTML or Microsoft Word formats, and they generally take about an hour to create. Reports can help provide accurate information for IT audits

and security purposes. Reports are also helpful in recovering from disasters (no need to try and guess about network component settings), and reports can also help provide troubleshooting information. The software is available free at Ecora's Web site.

.....

■ **HP and Voyence** teamed up for HP OpenView Network Configuration Manager, which includes Voyence configuration technology. The package can configure routers, hubs, and switches by any manufacturer. It offers network configuration change reports (which can be used in audit and compliance reporting) and has an easy-to-access proof of compliance.

HP OpenView Network Configuration Manager can also remediate noncompliant components.

.....

■ **Opsware** introduced its Opsware System 6, which is a comprehensive data center automation software suite aimed at distributed enterprise infrastructures. The main components of the offering include Server Automation System 6, Network Automation System 6, Visual Application Manager, and Network security service. Features include audit and auto-remediation, a compliance dashboard, software management capabilities for complex deployments, and a comprehensive policy framework. The Opsware System 6 will be available in the third quarter.

Security

■ **Courion** has announced its Courion RoleCourier role management product. RoleCourier is designed to help customers leverage roles and simplify security policy enforcement as part of their provisioning automation. With RoleCourier, organizations can minimize the number of roles created by identifying roles with potential overlap, comparing them with one another to help reduce the total number of roles. RoleCourier also supports three approaches to defining roles including bottom-up (starting with privileges users already have), top-down (defining privileges based

Go to Page 21

Event Resolution Becomes More Manageable

AlarmPoint Systems' Suite Alerts The Right People

by Joe Lazzaro

• • •

IF YOU'RE RESPONSIBLE for managing information technology for an organization of any size, the lifeblood of your company depends on keeping your mission-critical applications running 24/7, and this demands swift and targeted reactions should a disaster or service interruption strike without warning. Fast and effective event resolution helps keep downtimes to a bare minimum and also significantly reduces operating costs to the organization.

AlarmPoint Systems, a vendor providing systems management solutions, rolled out two versions of its AlarmPoint enterprise-wide

event resolution product suite: AlarmPoint Standard and AlarmPoint Professional. The solution is designed to automate event monitoring and resolution through mobile workforce needs management, allowing organizations to quickly identify the right IT staff person to correct the problem, in any location or on any device.

The package is centrally managed using a Web-based console, which can be accessed using a browser from any location. The console allows IT staff to manage user profiles, devices, group scheduling, event acknowledgement, and reporting functions. The solution also includes a configuration wizard, letting IT staff

and users manage information used for the automated event notification and resolution processes.

AlarmPoint Standard is an entry-level software package designed for small to medium-sized enterprises that need a solution to manage event resolution. The package runs on Unix, Windows, and Linux platforms and also supports Oracle as well as Microsoft SQL databases. The company offers an upgrade to the Pro version when and if this becomes necessary.

AlarmPoint Professional is suitable for SMEs all the way up to large enterprise-level organizations, having the flexibility to grow with the needs of an expanding organization. The package was designed to meet the needs of IT professionals in areas

such as incident, service, support, and change and configuration management. AlarmPoint Professional also comes with standard reports that exceed the requirements of Sarbox and NFPA 1600 standards.

According to Jayne Swystun with AlarmPoint marketing, "AlarmPoint is different from other alerting products because it takes a fresh look at the notification

SNAPSHOT

AlarmPoint Systems AlarmPoint

Both Standard and Professional versions take a people-focused notification approach to quickly delegate alerts to the most appropriate IT incident resolver or service owner

www.Processor.com/AlarmPoint

process. It was built to automate the management of event assignment, personnel scheduling and assignment, complicated notification management, and intelligent interaction capabilities. Legacy notification and alerting systems are typically built to be managed by other systems, and alerting systems simply forward data in and out. That is where garbage in/garbage out becomes a real problem."

According to the company, the chief competition to AlarmPoint's Standard and Professional comes from MIR3's inTechCenter notification product (www.mir3.com), and CalAmp's TelAlert (www.calamp.com), yet neither of these two products is a direct apples-to-apples comparison to AlarmPoint's Standard or Professional. □

Simplify Storage Management On Windows Servers & SANs

DataCore's Entry-Level SANmaestro Monitor Targets SMEs

by Daniel P. Dern

• • •

DISK PERFORMANCE, rather than that of the CPU, is what bounds most applications today, according to Ziya Aral, chairman and CTO of DataCore Software. In today's shared and virtualized storage environments, however, analyzing storage performance so it can be optimized typically requires extensive manual work by storage experts.

To help companies manage their shared storage, whether on PC servers or on SANs, DataCore Software has released SANmaestro SMB Monitor Edition, aka SANmaestro Monitor, an entry-level version of its SANmaestro Enterprise Edition Utilization Analysis Suite for monitoring and analyzing performance and resource usage on Microsoft Windows systems and on SANs.

SANmaestro Monitor monitors the storage elements in a network, measuring latency and other metrics, and provides analysis and decision support to help companies improve capacity planning, resource utilization, and quality of service. "This makes enterprise-level resource analysis, monitoring, and reporting functionality possible and affordable to the small to midmarket segments," says DataCore's Aral.

SANmaestro Monitor also provides an audit trail of I/O behavior and the use of storage, produces input for billing and charge-back programs, tracks performance, locates hotspots, and performs capacity planning.

According to Aral, the enterprise version is intended for companies with thousands of application servers and includes both

SNAPSHOT

DataCore SANmaestro Monitor

Starts at \$4,998

Helps companies improve storage performance on Windows servers and on SANmelody SANs

www.datacore.com

specific tools and a general programming environment that customers can use to create new storage monitoring and management tools.

SANmaestro Monitor is a small, non-programmable subset of the main version, intended for companies with up to 500 Windows application servers and/or with SANs based on the company's SANmelody PC storage server application, Aral says. "SANmaestro Monitor is for companies that don't have big SANs and want to get the most out of their drives. It's a more

traditional storage monitoring and management application. SANmaestro Monitor provides templates already set up to let users gather information and get them in predefined reports and analysis."

SANmaestro Monitor also offers new features including I/O profiles and, according to Aral, "a suite of tools for applications like Exchange and Oracle that lets you see patterns, to optimize storage to the performance of the application."

Competing products, according to Aral, "tend to be shareware, or programs included by server and drive vendors, that are too simple to be useful tools; for example, they provide information like 'megabytes per second.' And there are very complex environments—large-scale systems like CA Unicenter, BMC, or HP OpenView that do parts of it, but they require you to purchase the overall framework and then add the plug-in software for Windows performance, etc." □

Product Releases

Continued from Page 20
on an organizational hierarchy), and hybrid (a combination of the two).

■ **Ecora** released new templates for its IT management and reporting software, Ecora Enterprise Auditor. It also expanded Ecora inCOMMAND's policy library, which now includes FISMA, NIST, and VISA PCI standards. A report pack containing templates for FISMA, NIST, and VISA PCI is available for Enterprise Auditor, which collects configuration settings and has report templates for Gramm-Leach-Bliley, HIPAA, ITIL, Sarbanes-Oxley, and 21 CFR Part 11 compliance. Ecora offers trials of both Enterprise Auditor and inCOMMAND via its Web site.

■ **Elemental** released a regulatory policy framework designed to help government organizations comply with FISMA (Federal Information Security Management Act) best practices and security controls. As a part of the ESP (Elemental Security Platform), the offering helps monitor and report on the current state of the organization's security compliance metrics and risk posture. ESP with the new FISMA-compliant policy framework will be available by the end of this month.

■ **Juniper Networks** released its IDP platform. The security management tool provides application visibility and network control. Version 4.0 includes controls for VoIP, internal LAN, and cellular communications. NSM (NetScreen Security Manager) 2006.1 software provides central management for the IDP platform. NSM displays graphical views of host, application, server, and user activity on a network. The IDP system includes application control of VoIP networks and offers daily signature updates for IDP customers. The IDP platforms are supported through Juniper Networks' J-Security Center. IDP version 4.0 software appliances start at \$9,000 for the IDP 50.

■ **Liquid Machines** announced its Document Control is being used to enhance the **Brainloop's** Secure Dataroom platform. The Secure Dataroom platform is a Web-based document management service for editing and distribution of confidential documents. Document Control adds features that ensure policy protection. It extends usage controls across more than 65 different applications and file formats such as Adobe Acrobat and Microsoft Visio. Users can cut and paste, drag and drop, and merge without removing protection. Businesses can monitor and log events such as Open, Save, or

Save As, and many others to support compliance initiatives.

■ **NetClarity** introduced Auditor 5.0, an upgrade for NetClarity's Auditor Enterprise and Auditor Branch security appliances. This version includes more than 30 changes, such as a newly designed VQS (Vulnerability Quarantine System), compatibility with two additional smart switches, and compatibility with network-management and network-reporting products. Auditor 5.0 also has new asset-discovery tools and enhanced inventory-alert engines. The software can also provide automated backups with encryption for both Windows and Linux servers. NetClarity has provided built-in support for checking the regulations for Canada, Japan, Poland, Thailand, and the UK, as well as several Latin American countries. NetClarity has also improved the VQS technology so that it includes MAC-based clientless Network Admission Control. Auditor 5.0 starts at \$1,295.

■ **NetSupport** released NetSupport Protect for the detection of malicious code and protection from accidental changes to system settings or damage to the system and its files. NetSupport Protect will also prevent users from installing unauthorized applications or making other changes to a system. It can hide certain files and folders from users and restrict which devices and drives users can access. NetSupport Protect is available in English, French, German, Italian, and Spanish.

■ **Sensory Networks'** new NodalCore Security Appliance Architecture software suite, also known as SAA Connect, is now available as a free download to registered customers. SAA Connect can scan email and Web traffic at up to 200Mbps on UTM and security appliances, proxies, and servers.

■ **Sherpa Software** announced the latest release of Mail Attender for Exchange Enterprise. With version 4.0, Mail Attender for Exchange provides policy enforcement and content management in PST (personal storage folders) files on desktops and servers, Exchange mailboxes, and public folders. In this new version, Active Directory can be queried for mailbox-enabled objects and user groups allowing administrators to enforce policies based on a user's membership in particular groups. In addition, the Mail Attender console now has the ability to provide alerts and immediate notifications if a process encounters any issues or a

database error occurs, rather than simply logging it.

■ **Webroot Software** announced its latest release in antispyware software, the Spy Sweeper Enterprise 3.0. This software features kernel-level driver capability to detect and remove spyware, including advanced strains that use rootkit technology to hide from Windows OSes. This program also features a number of real-time shields to prevent malware intrusions. These shields include the Spy Communication Shield, which blocks spyware communication to Web sites known to host potential threats, and the BHO Shield, which automatically blocks the installation of BHOs (Browser Helper Objects) unless the administrator approves the objects.

Storage

■ **BakBone Software** released NetVault Backup 7.4.2, which supports Apple's new Intel processor-based Macs. The data security software has increased support for media management and international languages and boasts enhanced CLI (command line interface) tools and Xsan management. NetVault Backup 7.4.2 supports Mac OS X.

■ **B & L Associates** released VaultLedger OnDemand, its remote hosting product for the VaultLedger tape management software. This software can manage all types of removable media both onsite and off. With VaultLedger OnDemand, a user can access his database anytime from virtually any computer that has an Internet connection. OnDemand uses a series of redundant firewalls as well as SSL encryption to keep the database secure. It also features a load-balanced IDS that can identify and alert an enterprise of any attack signatures or other anomalies or suspicious activity instantly.

■ Redundant files waste storage space and slow down backups and other file transfers. **Reasonable Software House** released NoClone 3.2, a Windows utility that compares files byte-by-byte, rooting out duplicates even with different file names. NoClone 3.2 has such features as powerful search filtering, preview functions, and the ability to save searches for later use.

Telephony

■ **Qovia** has upgraded its IP Telephony Manager. VoIP supervisors can now oversee the quality of calls from the gateway to the handset while the calls are in progress. Better reporting helps IT personnel detect trends and pinpoint problems,

and improved alert capabilities allow tailoring to more situations.

SERVICES

Hosting & Disaster Recovery

■ **RestartIT RecoveryRack** from **AmeriVault** lets customers utilize rack space in the company's primary data center to facilitate rapid vault-to-server recoveries. AmeriVault has tailored the service for interim business recovery, allowing SMEs to ship their server to AmeriVault and restore any lost applications or data. AmeriVault also announced it is making its MobileVault and HOTBOX devices available to consumers. Both devices connect to a user's network and provide several hundred gigabytes available data for system restoration.

Security

■ **McAfee's** Foundstone Professional Services will launch several tools to help developers write more secure online applications. Five educational tools provide developers with example vulnerabilities they can use to improve their own applications. Hacme Bank provides a simulated online banking environment with common and well-known vulnerabilities. Hacme Shipping uses ColdFusion MX7 and the MySQL database while Hacme Travel provides a sample reservation system written in C++. Hacme Books is a J2EE application and includes both design and implementation issues. Finally, Hacme Flowers provides an example online flower store written in PHP. Four additional reference tools help developers avoid common security issues. HacPac brings together several relevant bits of security information into one place. Information provided through HacPac includes testing tools along with updates and news items. CodeScout lets developers make sure their applications adhere to standard practices while SiteScope provides detailed information on Web site traffic. Finally CredDigger attempts to seek out credentials for each user.

Storage

■ **Asigra** teamed up with **NetMass** to release an option designed to help remote offices and branch offices back up important data. The NetMass solution features an agentless technology and is based on the Asigra Televaulting software. As soon as the software is installed on a host machine at a branch office or remote location it will begin creating a block-level backup that will be sent to secure NetMass data centers via IP. NetMass and Asigra are offering advanced copies of this software service to hurricane-prone states.

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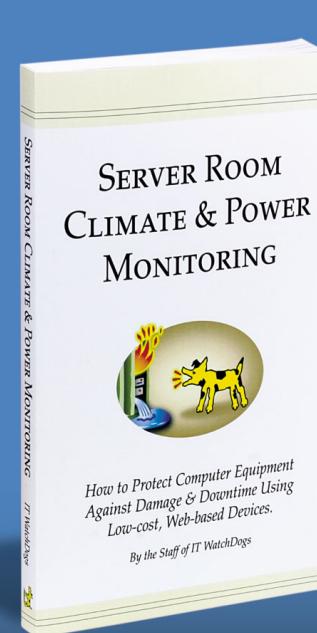
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With the growing power needs of data centers and the move to lights-out automation, close attention must be paid to the distribution of current from the branch circuit to the various equipment in the Rack. For example, we now have redundant power supplies, blade servers, pizza boxes, and terabyte storage networks all consuming a portion of the precious current available.

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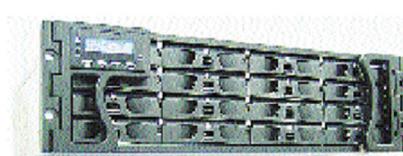
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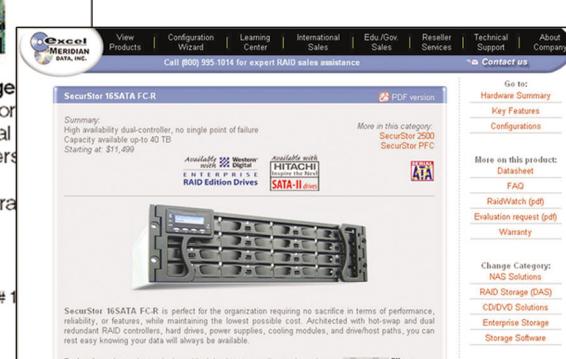
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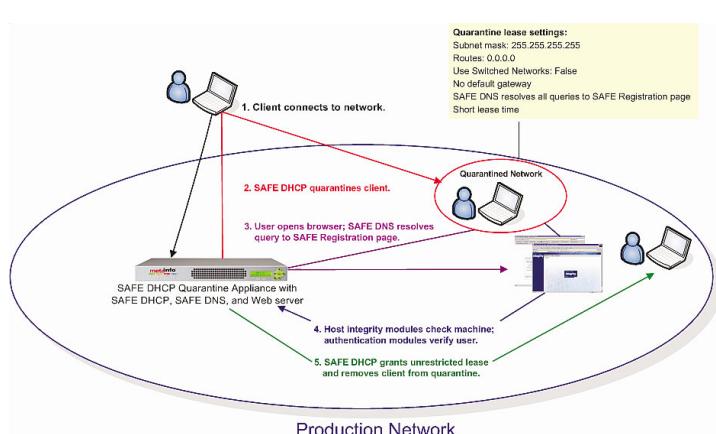
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Manufacturer Presentation

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Britestream Networks & OSST Partner On Scalable Security Appliance

Britestream Networks and Otto Security & Software Technologies (OSST) have partnered to deliver a highly scalable security appliance built on Microsoft Internet Security & Acceleration Server. The New OSST SecureGUARD combines the strengths of Microsoft's ISA Server 2004 and Britestream's SSL Security NIC to deliver perimeter security, branch-office connectivity, Web caching, and maximum SSL performance in one solution.



SecureGUARD

The wide range of security appliances fit from low-cost to maximum-performance solutions. The SecureGUARD Series can be adjusted to suit nearly all of your business requirements for content and information security. Simple, fanless, low-noise, and low-cost models for small and midsized businesses up to highly available enterprise solutions with a maximum of performance.

The SecureGUARD appliance product line for Microsoft ISA Server 2004 delivers a combination of perimeter security, branch-office connectivity, and Web caching in easy-to-use appliances at an affordable price.

"We are very excited to enter into this partnership with OSST," says Bob Weinschenk, CEO of Britestream. "Their delivery of a fully integrated security appliance built on Microsoft and Britestream technologies creates a solution that is both highly scalable and easy to deploy."



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OPINIONS

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Something That Could & Somethings You Should

I have an Open-e NAS system in my office. Open-e is a German company which, of course, is where the World Cup is this summer. So in the spirit of international competition, I thought I'd tell the story of The Little German Storage System That Could.

I have a ridiculous office setup with four systems for one person—one of them being my NAS server. I don't really need it for much, but I like knowing that I can use it for a quick backup and that my data stored on it can be immediately retrieved.

Problems Arising

I became alarmed last week when this machine suddenly started to whine. At first I thought it was one of the disk drives in it, but when I crawled under the table and pulled the skins, I was surprised to find out it was the processor fan. It was an old motherboard with an old 400MHz processor and an old fan, and the squealing just kept getting louder and nastier until the system shut down.

Lacking options, I decided to upgrade this PC with a new motherboard, processor, and power supply. I admit that I was concerned

that this was going to be one of those awful weekend-ruining experiences, but it turned out to be much easier than expected. The Open-e firmware eprom worked in this motherboard without a hitch and my dual 3Ware RAID cards started right up and came back exactly as they had been before it died, only much faster and quieter. My props to Open-e for making a flexible and robust system. I'm sure it would have been more painful if it had been Microsoft software, requiring me to reload my operating system just because the CPU changed. By the way, best of luck to Germany in the World Cup, although my favorite team now (an underdog, of course) is Ecuador.

Room For Improvement

I always think that summer is an excellent time to ponder ways to improve your operations. If you think of storage as an infrastructure, then you ought to be

If you already have a SAN but aren't using storage virtualization, you should consider it.

thinking about ways to make it safer, more stable, more flexible, and more scalable. If you aren't already using SANs, then you ought to consider looking at them because storage consolidation in a SAN reduces the number of management points involved with storage, which means that a single administrator can take care of more terabytes of storage.

because you probably have people available who know how to think about Ethernet and IP. There is a definite place for Fibre Channel, but it's not a good fit as a "starter-SAN." EqualLogic went the extra mile to simplify installation and management of its products. I have spoken to many of its customers, and as a group they are very vocal in their praise of the

The Virtualization Choice

That leaves the question of which type of virtualization is best. Unfortunately, there are several types to choose from, including host volume management software, network-based virtualization, and subsystem-based virtualization located in storage controllers. In general, I like the architecture of subsystem-based virtualization best because I believe there are reliability and availability advantages.

That said, I also know that the network-based IBM SVC (SAN Volume Controller) is an excellent product. I have spoken to end users on several occasions, and in every case the response has been strongly positive. Storage administrators are able to perform work during normal production hours that they would never be able to do without SVC. For some, using SVC has made an enormous difference in their lives because they get their evenings and weekends back. It is a feature-rich product with many useful applications for managing data and storage quickly.

I also know customers with StoreAge's out of band virtualization product also are very happy. It's not as transparent to set up as some virtualization products, but it scales very well, and there are several useful application options.

Send your comments to marc@processor.com

MARC FARLEY

AUTHOR
Marc Farley is the author of "Building Storage Networks," the leading technology book in the field of storage networking. He is also the president of Building Storage, Inc., a company that provides consulting and educational services to the network storage and financial services industries. Farley regularly writes and speaks about storage networking technology and is an online expert for the SearchStorage Web site.



For newcomers (and most everybody else, too), I strongly recommend looking at EqualLogic and an iSCSI SAN. You might be surprised how achievable this is. The networking components with iSCSI are less expensive to buy and easier and less expensive to manage than Fibre Channel

product, especially how easy it is to install and manage.

If you already have a SAN but aren't using storage virtualization, you should consider it. Virtualization provides both an abstraction layer for storage as well as automation for provisioning and managing storage. These techniques are well known to reduce errors, and where storage management is concerned, eliminating errors is the primary goal. In addition, the automation in virtualization means the work is done more quickly.

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OPINIONS

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Does Microsoft's Agenda Match Yours?

The last set of Visual Basic SDR (Software Design Review) meetings was held back in mid-May. These conferences invite about 20 of the industry's brightest minds and most influential people—but for some reason they still keep inviting me. We go to these meetings so we can hear Microsoft's latest ideas about how to improve ADO.NET Visual Basic, but more importantly, Microsoft uses this venue to listen to our feedback. I wish you could hear a recording of the arguments and discussions that make this a valuable experience for everyone.

Is A Company's Direction Set By Personal Agendas?

Based on what I heard over the last two years, I would like to share some thoughts on responsibility, goals, and direction. Microsoft, like most companies, is composed of many smaller units, and those units are composed of many individuals. Each of those individuals has a personal and professional agenda. Sometimes the reason the person is working for a company is simply the desire to find a spouse, get a few shares of cheap stock, or have health insurance coverage, so not getting fired is a primary goal.

I didn't find many at Microsoft in that category. Regardless of their personal goals, the developers and product and program managers that spoke to us clearly have technical agendas. They have a view of the world based on their own personal experience that filters, focuses, and biases their work and attitude. They leverage this vision to mold, influence, market, and promote the products being built to bring this agenda to fruition—to make their world better.

I think this is probably the same for many companies. As managers, we intentionally hire people with vision and drive who can accomplish the company's goals, but aren't those goals simply a composite of these individual goals? Microsoft's goals could be boiled down to an interest to make money. If this means building a quality product that's used by every living being on the planet then that's what it will do, and it has (well, to a great extent).

Do Microsoft's & Your Company's Agendas Match?

The problem as I see it is that while these individual and company goals are important to the individual and the company, do they

match the needs of the customers—those who buy and use its products? Sure, if the company is planning to stay in business, it must continually evolve its goals to match those of the companies and individuals.

But what if a company like Microsoft made a single product (like an application development

need to fundamentally change the way they access data? What if they decided that all data access should be done using objects instead of relational table access? What if they decided to spend all of their limited resources on building this "better" solution that made it more difficult for their teams to finish the work they had done on the

This means Microsoft (as well as any company) needs to keep sight of the customer's needs and goals.

First, Finish What You Started

At this SDR, as with the last, I and many others tried to get Microsoft to focus on fixing and refining (and documenting) the technology it's already built without leaving more developers behind with obsolete applications and skills. My bulleted list of suggested things to fix filled three pages; none of these fixes included object relational mapping or anything that did not address established ways of accessing data, techniques the vast majority of MIS shops have been using for a decade.

Sure Microsoft needs to build its customers better tools and interfaces and think about future products. But does it need to go beyond that? Perhaps it's enough to simply build the platforms and interfaces, document them, and step aside to let the third-party companies build the OR mapping databases and code generators. I also think Microsoft should figure out how to finish what it starts before launching out on another campaign to get everyone to design and implement applications using Microsoft's vision of the "right" way to solve our problems. 

WILLIAM (BILL) VAUGHN

AUTHOR William (Bill) Vaughn is an industry-recognized author, mentor, and subject-matter expert with more than 30 years in the computing industry as a developer, manager, trainer, marketer, and writer. After 14 years at Microsoft, Vaughn stepped away to work on his new books, in addition to mentoring and leading training seminars. He's written six editions of the "Hitchhiker's Guide to Visual Basic and SQL Server" and two editions of "ADO.NET and ADO Examples and Best Practices for Visual Basic Programmers." He and Peter Blackburn just finished "Hitchhiker's Guide to SQL Server 2000 Reporting Services."



platform or a data access interface) that all of its customers had to use? Clearly it could not address the specific needs of a diverse mix of customers whose needs vary widely. Not every customer builds applications in the same way or even approaches problems in the same way. Would it even satisfy the mainstream "average" customer?

What if Microsoft decided (for whatever reason) that developers

existing data access interfaces, tools, and documentation?

I say limited resources because every group at Microsoft has a finite budget and staffing levels. This makes sense as we've learned that there is an upper limit to the efficiencies of scale when it comes to writing, testing, documenting, and productizing software. More people pounding keyboards do not always help—especially when they don't have the same goals.

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SMC Networks' TigerStack II 10/100/1000 Switches are the newest in a series of next-generation high-performance stackable switches that deliver high scalability, wire-speed Gigabit performance, high availability, 10Gb Ethernet uplinks, and redundant power options. The switches are the first to include IPv4 and IPv6 management options, enabling flexibility.

The TigerStack II 10/100/1000 1000 SMC 8824M/SMC8848M stacks up to eight units in a stack, providing up to 384 Gigabit ports. A stack can be created with 24- or 48-port switches, providing unprecedented flexibility. It provides up to 48 built-in copper Gigabit ports, including four Combo SFP ports supporting copper links or SFP adapters for easy, flexible connection to fiber-based Gigabit media and a switching capacity of up to 176Gbps.

The two 10Gb module slots on the rear of the switch provide support for XFP 10Gb connections. These provide high-bandwidth connections to the core of a network and are in addition to the two stacking connectors giving high-capacity connections to the other units in the stack.

The SMC8824M/SMC8848M switches feature a variety of network management



options for IPv4 and IPv6: console CLI, Telnet, Web, SNMPv1/v2/v3, RMON, TFTP, Port Mirroring, BootP, and DHCP. They also support advanced traffic management options such as 802.1x, Bandwidth Control, Broadcast Storm Control, and support for IGMP Snooping v1/v2.

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With 24 ports, the Asante IntraCore 36524 routing switch has a higher port-density count than its predecessor, the IntraCore 35516. As a result, network administrators can divide the network into more network segments. Each segment can provide more bandwidth with less network traffic congestion.

Asante IntraCore 38480

Advanced Layer 2+ Switch Features Full-wire Speed with Minimized Latency



The IntraCore 38480 has a high-density port count of 48 10/100/1000 copper ports, plus four Combo ports for adding fiber via SFP MiniGBIC module. Designed to be a space-saver in the rack and wiring closet, it can also eliminate cross switch traffic. Boasting an impressive 96-Gigabit switching fabric, the IntraCore 38480 supports full-wire speed on all ports. It has advanced traffic control based on L2-L7 data of incoming frames.

The IntraCore 38480 supports jumbo frames up to 9k per frame, best for use with multimedia applications and network storage. With additional features such as CoS and IEEE 802.1p traffic prioritization, applications such as VoIP can pass traffic with minimal latency.

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The Linktropy 4500 from Apposite Technologies is a new generation of WAN emulator, combining unsurpassed precision with unbeatable prices. The Linktropy 4500 simulates WAN bandwidth, delay, congestion, bit errors, and other important link characteristics at speeds up to 155Mbps.

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Improve Indoor Wireless & Cell Signals

Ideas For Making Wi-Fi Communications Smoother

by Will Kelly

Wi-Fi-ENABLED PDAs and cell phones have become standard issue for many of us. For many workers, mobile devices represent their primary communications device for work and personal lives. However, poor cell and wireless coverage plagues many office buildings.

Paul Tinney, vice president of marketing for SpotWave, an Ottawa, Canada-based developer of wireless carrier-approved,

indoor wireless coverage hardware, drives home the need for improving indoor cell phone coverage. "50% of wireless calls take place within buildings. The last frontier for wireless calling is buildings because users are used to the ubiquity and coverage." He further stresses, "Callers need to blame where they live and work, not their carrier."

While Fortune 500 companies have the assistance of the wireless carrier to improve their indoor wireless and cell signals to help keep large corporate customers, small to midsized enterprises aren't going to have this option. As Tinney advises, "Recognize and understand that poor cell reception is within your own control, and you can fix the problem yourself."

Following Tinney's playbook, SMEs need to take the responsibility for contiguous cellular and Wi-Fi coverage within their own facilities and look toward the new class of wireless base station solutions now just hitting the market.

Companies such as SpotWave (www.spotwave.com) with its

SpotCell product line and InnerWireless (www.innerwireless.com) with its Wireless Utility enable any SME working with its wireless carrier to improve cell and wireless coverage in its facilities by placing a base station in its facility. These devices work very similarly to a Wireless Access Point in their setup and configuration. In fact, Tinney says setting up these devices is "truly easier than a Linksys device," although these devices do require the placement of an outside antenna.

Peter Jarich, senior analyst of IT infrastructure for the industry analyst firm Current Analysis based in Sterling, Va., defines two basic ways for improving indoor cellular coverage. "The first way is to place a repeating signal base station outside the office building. The second way is to place a base station cell site within the office building."

Developing An Access Point Placement Strategy

Improving wireless and cell signal coverage in your facility starts with your initial mobile device and telecommunications strategy. Tinney says, "Without thorough coverage, you won't get the most out of your tools." Poor wireless and cellular coverage within your office can have business repercussions; take, for example, a salesperson that misses a call from a prospective customer.

Current Analysis' Jarich points to examining the return on investment for improving cellular and wireless coverage in your office. Building owners would have to examine the benefits it could bring to the value of their building. SMEs need to examine the business benefits of improving wireless access within their facilities, including improved customer responsiveness.

Base stations and repeaters have limited capacity, and thus it's prudent to do some upfront analysis on the capacity your SME's staff is going to require from the wireless base station(s).

you plan to install and provision with your facility. "Capacity is always an issue," advises Jarich.

Additionally, while most SMEs are going to get sufficient coverage with one wireless base station or repeater within their facility, your upfront analysis may uncover

the need for additional base stations or repeaters depending on your facility's size and building composition.

Bringing Cell & Wi-Fi Signals Into Your Office

Both Tinney and Jarich emphasize that base station and repeater technologies are still emerging. This may be fine with SMEs who consider themselves early adopters. In fact, Jarich labels them as a "work in progress." Nonetheless, wireless base station and repeater solutions are a solution to a problem that has been prevalent since cell phones became ubiquitous. □

Tips For Indoor Wireless & Cell Signal Improvement

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Product	Description	Web Site
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RadioFrame Networks S-Series	Supports multiple cellular, Wi-Fi, and 3G protocols	www.radioframe.com
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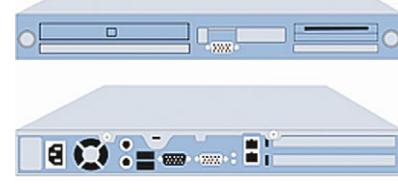
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Secure Telecommuting

Security, Management & Standardization Are Crucial For Success

by Julie Sartain

• • •

TELECOMMUTING IS ON the rise and spanning the globe as more companies expand borders across continents. For example, a midsized development and manufacturing company in Spokane, Wash., has sales personnel in Africa, South America, and New Zealand, and its accounting and finance staff are spread across Tennessee, Belgium, and the UK. All of these people work from home using remote access through a secure VPN network, and they service clients all over the world. But is their network secure?

"Security is always an issue," says Michael Brandley, network operations manager at Pyrotek, the company mentioned

above. "But we are a global company communicating with all of the states, plus Europe and China. Our people can't just be available from 8 to 5. Broadband is so common now that remote access just makes good business sense."

Using A VPN

Brandley says, "We use the Symantec products with a Citrix farm acting as our group balancing, Symantec's client VPN to access resources and run programs at our data center, Symantec's client security on our notebooks, and pcAnywhere to manage our servers at remote locations and to troubleshoot problem systems. So far, we've had no security problems."

"I have a VPN connection to our office in Mobile, Ala.," says Bryan Wilson, director of software engineering at Targeted Technologies, "and I live in Houston. I use a laptop that's configured to use domain credentials that are cached from when I logged in to the network the first time in Mobile. All of the tools we use for remote access are free (VPN, remote desktops, etc.), so I guess it's just a matter of having an effective IT group. The 'Remote Desktops' tool is part of the Windows Server 2003 administration pack (it's pretty much just like pcAnywhere except that it's built into the OS)."

But security still remains the primary concern. Microsoft advertises that enhancing the security of corporate assets worldwide is its top priority. Citrix Systems in Fort Lauderdale, Fla., says it wants to make every business on the planet an "on-demand enterprise" with secure data that's immediately and "easily accessible from anywhere, using any device." Symantec's promise is to protect your "most important asset—information," at all costs. And yet telecommuters remain a small percentage of the workforce.

Access Without A VPN

"If a VPN solution is not available, which may be the case with smaller companies or those that need to connect to multiple external organizations themselves, a flexible remote access/remote control product may be just the answer," says Mike Baldwin, product manager for pcAnywhere at Symantec. "Using IP-based networks or even direct-dial modem connections, a remote access program can provide a secure and reliable means of connecting to an employee's office desktop, a shared central

server, or even a customer's workstation. Once basic connectivity is established, productivity can be further enhanced by using a remote access/remote control solution for collaboration. Those that offer true desktop sharing (where activity on one machine is exactly replicated and viewable on another) provide a direct window into what work one person is performing, while others can view, advise, or even directly assist."

And for some smaller organizations, such as an independent publisher in Maine, using the Internet, an FTP server, and email is the best solution. "For security reasons, we don't have a central network that outside contractors access," says Angela Hoy, owner of Booklocker.com. "We exchange files with them via FTP uploads/downloads and, of course, email."

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- Companies have access to a much wider field of talent
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- Companies can easier retain employees who develop special circumstances such as employees who have disabilities, young children, unique family situations, etc.
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Standardize Everything

Brandley says standardization is key: software, hardware, policies, security procedures, management practices, and even user access. Management, however, will always be an ongoing issue. "IT departments need to know and understand that whenever you add infrastructure outside the central office, twice the management is required to handle the load, but the benefits in productivity alone far outweigh the cost of the additional staff."

Baldwin agrees. "The most important factor when considering best practices for

providing telecommuters and mobile workers access to an enterprise network is ensuring that consistent standards are enforced across the board," he says. "This means that the remote worker is held to the same security standards as the workers in the office, however rigid or flexible those standards may be. All too often we hear of situations where shortcuts are taken or certain security policies circumvented, due to some level of trouble establishing a connection 'the right way.' Reducing adherence to security standards, regardless of physical location, increases risk across the entire network." **P**

Implementing A Telecommuter Program**SECURITY**

- Your remote software should have integrity checking (features that identify changes that have occurred since the original installation)
- The software should generate alerts when it detects a number of unsuccessful attempts to connect to a host PC
- Software should generate audit logs of all remote transactions
- Authorization and access controls should be in place
- The program should have a feature that lets administrators limit access to computers within a specific subnet or to a specific TCP/IP address
- Software should support both symmetric and asymmetric encryption services (public key encryption) to prevent hackers from intercepting data during transmissions

STANDARDIZATION

- Make certain that all equipment (hardware and software) is the same company-wide
- Even though some broadband companies want to provide you with their equipment, don't use it. Use all of your own broadband equipment; keep it all compatible and standardized including the firewalls, VPN software, security software, and even the user logins
- Maintain constant visibility to all the computers in your network, both onsite and offsite
- Make sure all systems are handled properly and that each computer checks in regularly for problem issues

MANAGEMENT

- Be sure to clearly define management responsibilities
- Create, enforce, and maintain clear management policies
- Be aware that managing remote users takes twice as much staff and time as managing onsite users, but it's often worth the effort

Manufacturer Presentation

Communication - Telephony Advertisement

Digital Enhanced Cordless Telecommunications

The SpectraLink Dect System offers a cost-effective solution for small and medium-sized businesses looking to improve productivity, responsiveness, and mobility in the workplace.

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Handset options include three different models, all operating in the 1920 - 1930 MHz unlicensed PCS (UPCS) spectrum.

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The EtherPathX4 is a four-port serial server for Ethernet LANs. The EtherPathX4 connects any async serial device through a LAN and between LANs via routers. The EtherPathX4 will also connect other serial devices, such as remote data collection terminals, SCADA RTU/Host systems, UPSes, bar code scanners, alarms, access control, timeclocks, climate control devices, and serial management ports, directly to an Ethernet network.

The EtherPathX4 supports TCP/IP, allowing the necessary data connection across networks as well as connections between hosts on a network and the device attached to the EtherPathX4 server.

The EtherPathX4 supports serial interface speeds up to 230Kbps. The EtherPathX4 can automatically open connections when it powers up, eliminating the need for a manual request. Modem controls (RTS/CTS) and Xon/Xoff are also supported. If the connection is lost, the EtherPathX4 will automatically reconnect when the LAN path is again available.

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Tips For A Better Data Center

There's Always Room For Improvement

by Douglas Schweitzer, Sc.D.

MOST EMPLOYEES GIVE little thought to what goes on behind the scenes of the data centers they use. Ask any IT manager, though, and he'll tell you it's seldom he's not preoccupied with it. Following are some of the best strategies for improving your enterprise data center.

More Power To You

More power usually translates to increased work output. If you're just setting up, you can easily do some planning ahead. According to systems integrator Lewis G. Rosenthal, CNA, CLE, CLP of Rosenthal & Rosenthal, "When planning a data center installation, calculate the power requirements carefully and then increase them by a healthy margin (1.5x) to allow for additional equipment, server upgrades, and even fan throttling."

If you've got your data center already in place, you'll need to be sure your existing system is up to the task of improvement. When planning an expansion, the same rule of thumb applies as when setting up initially, but you'll have to consider how close to the margin you already are. Rosenthal suggests you increase that by a factor of 1.5 and then recalculate for your new equipment, adding the two products together to determine your overall power requirements. Says Rosenthal, "Don't forget to limit your circuits to 30A each, and carefully partition your equipment so as to keep a dual power supply server divided between UPSes and, optimally, raw circuits."

Keep Cool

Fans are an important part of data center maintenance, especially in locations with restrictive space constraints. The data centers of today not only use a large number of blades, but those blades are packed densely, making them more sensitive to overheating. In such situations, you can use cooling fans that fit in 1U spaces and air

conditioning units designed to cool single and double-wide enclosures. According to Mark Langworth, chief technology officer at BroadGroup, any innovations in terms of new cooling products are worth checking out.

Better Interdepartmental Communication

It goes without saying that having good interaction within and amongst departments is a must for any business, but this is especially so when it comes to the data center. Brian S. Bailey of Digital Security International says he's seen too many companies that have similar storage security projects underway in different departments, and the employees are not communicating at all.

He notes an example where the AS/400 group is working on a storage security project, as is the Unix group. However, the groups are not necessarily exploring the same solution, even though there are safeguards that will enable them to standardize on a solution, making it more cost-effective to implement.

Bailey recommends that the security team meet with the various storage teams to discuss project needs and possible solutions. Using available safeguards enables organizations to protect their stored data, satisfying the security team and simultaneously allowing the storage team to meet its objective of backing up data without negatively impacting performance.

Formal Development Program

Soft skills are more important in today's work environment than ever. One way to improve employee development is to follow Allstate Insurance Company's training and education paradigm. Allstate has a formal on-the-job development program for training IT workers. It provides readily available and simplified courses for workers. Employee educational solutions include various combinations of online learning, instructor-led teaching, role-playing, and programs based on alliances with various colleges and universities. Not only are its employees encouraged to achieve their goals, but they're encouraged to celebrate achievements via parties, boat cruises, sports, and raffles. 

Tip Du Jour

Security is still a big issue with the data center. Therefore if a data center has some high security areas or if the director of IT is looking for an alternative to using Explorer or Outlook, there is another interesting option. Take a batch of desktops that are LANed to a firewall and connected to the Web. Install an application server just for email and browsing. For this job, a 2.4GHz, 2GB RAM server should be sufficient to handle roughly 50 desktops, depending on the type of Internet services the users require.

You may also wish to use clustering and load sharing for very high-use environments. Then install applications such as Firefox for browsing and either KMail or Evolution, two quite adequate email client packages. You can then install and run a small script on client machines that opens a connection to the application server, thereby letting users run Firefox and email applications all day without having a Windows browser or email application ever connected to the Internet.

According to Mark Langworth, chief technology officer at BroadGroup, any innovations in terms of new cooling products are worth checking out.

Manufacturer Presentation

End Nodes - Storage Advertisement

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The vulnerability of information stored on PC hard drives is a recognized security risk. Unlike most other PC data storage media, the hard drive usually stays with the PC. Every time a PC leaves a company's control, all the data and company information will go with it. Even if the hard drive breaks down, the storage platters will still contain information that could be read once repaired. The **V6000 HDD Max** alleviates all of these problems.



The **V6000 HDD Max** is a state-of-the-art, one-pass conveyor degausser designed for the volume erasure of hard drives. The specially designed high-intensity coils ensure complete erasure of hard drives in large quantities, perfect for IT logistic and security providers.

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Safety: With safety in mind and to meet the latest ICNIRP Magnetic Exposure Guidelines, the **V6000 HDD Max** can be operated remotely via an umbilical button.

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Manufacturer Presentation

End Nodes - Printer Advertisement

TallyGenicom's New High-Speed Serial Matrix Printers Have Multiple Connectivity Solutions

TallyGenicom announced the 2265+ and 2280+ models of the 650 and 900 cps serial matrix printer family for time sensitive and critical business printing applications in industries such as warehousing, manufacturing, transportation, retail, and others that require multipart forms printing.



The 2265+ printer is available in a variety of configurations, making it the ideal choice for multiple connectivity environments. The configurations include parallel only, parallel with serial, internal Ethernet, PCL, and LAN IPDS for IBM AS400/iSeries users. List Prices range from \$1,845 to \$2,227.

The 2280+ is available in a variety of configurations, including serial, parallel, PCL, internal Ethernet, and LAN IPDS. List Prices range from \$2,543 to \$3,709. The 2280-2T+ will be available in July 2006 for users that require the ability to print up to nine-part forms for use in industries such as transportation, customs brokerage firms, and the healthcare field.

"By adding this robust and comprehensive product line to our offering, TallyGenicom is continuing our commitment to our customers by being the solution provider for their changing serial matrix printer requirements" says Chuck Ward, serial matrix product marketing manager at TallyGenicom.

TallyGenicom continues to support Digital/Compaq serial matrix printer users. Included with this announcement is the release of the LA650+ and LA800+ for these legacy applications. These new printers replace prior models 2265, 2280, 7265, LA650, and LA800.



WHAT'S HAPPENING

End-To-End Data Center Life Cycle Management

Collective Technologies Eases The Pain Of Inadequacy

by Chris A. MacKinnon

• • •

PRETTY MUCH ALL TYPES of companies and organizations eventually feel the pain of inadequate data center facilities. According to Ed Taylor, chief executive officer at Collective Technologies (www.coltech.com), one of the biggest challenges facing today's organizations is building data centers that are equipped to meet their near-term IT infrastructure requirements while having the flexibility to grow with evolving business needs.

Industry Challenges

Taylor says changing business needs, new application developments, and IT infrastructure advances all happen too quickly for yesterday's data center to accommodate. "In fact, the entire life cycle of the data center, the technology within it, and the business it supports must be brought into synchronization. Overbuilding is cost prohibitive, and building only to meet immediate needs doesn't account for future growth."

DCLM (Data Center Life Cycle Management), on the other hand, offers a strategic, tiered approach to create "adaptive data centers" that can quickly change to meet the evolving demands of business and technology. Collective Technologies, a Texas-based enterprise-class IT service and solution provider, offers a DCLM solution that gives customers a single point of contact with the expertise to coordinate all facets of expansion, relocation, or consolidation projects.

Taylor breaks up the data center management industry into three types of companies: IT infrastructure, design and build, and relocation vendors. He says, "We feel this specialization is inadequate for the challenges associated with supporting and managing today's complex data center environments. Corporations, universities, and government organizations are looking

for vendors that can provide an end-to-end solution to their data center management needs. No organization wants or needs the additional stress of acting as its own contractor to coordinate multiple sets of resources to undertake a complex data center move."

Taylor notes that recent business trends such as globalization, governance issues, and heightened security concerns along with technology trends such as increasing power requirements due to high density servers, clustering, and virtualization are placing enormous demands on corporate IT infrastructures. At the same time, IT budget expenditures continue to rise. He says, "All of this is causing a growing demand for new data centers. IT and facilities personnel must work in tandem with the business stakeholders they support to ensure the complex tasks of data center planning, design, relocation, and construction have the flexibility to reflect companies' ongoing and future needs while remaining cost-effective."

Industry Answers

Taylor says enterprises are interested in Collective Technologies' approach to

expand, operate, and evolve their data centers in an adaptable, cost-effective manner.

He says the benefits of Collective Technologies' DCLM solution are also attractive to IT managers. "Collective has provided more than 5 million consulting hours of complex IT infrastructure services over the past 12 years. The DCLM solution takes advantage of this extensive IT infrastructure expertise to create a set of proven,



process-oriented services that help IT managers create adaptive data centers that meet today's needs but can easily expand as business requirements change." Taylor says this helps IT managers optimize their infrastructures and facilities in a cost-effective way.

To ensure the best approach for each customer's requirements, Collective Technologies' DCLM solution is divided into four service modules. Taylor says the first service module, Data Center Analysis and Planning, provides a detailed analysis of an organization's current and future data center needs, including an accurate inventory of the computing and network infrastructure, application mapping, and a roadmap of projected future computing needs. This information is

CEO Ed Taylor says Collective Technologies is the only company that offers IT infrastructure, design and build, and relocation services in one single solution.

DCLM because the company's approach takes a holistic view of data center change events and ecosystems of various vendors (real estate, OEM, planning, construction, etc.) to coordinate the management of complex IT projects and enable organizations to

then compare to the current physical infrastructure and the client's budget, goals, and objectives to determine the recommended course of action, whether it be retrofitting of current facilities, building new ones, or relocating to a third-party facility.

TWO TERMS



Web 2.0 (World Wide Web, 2nd Generation)

What it is: Web 2.0 is all about collaboration and interactivity to a level not seen in the Web before. Web applications such as blogs, wikis, RSS, podcasts, and online communities are all often mentioned in the context of Web 2.0. New protocols, such as REST (Representational State Transfer), SOAP, CSS (Cascading Style Sheets), and even proprietary Web services/applications are all part of Web 2.0's interactive character.

Why you should care: As these applications and services evolve from niche sites created by startup companies into the mainstream, customers may demand that businesses deliver the same type of functionality via their own Web sites. Because programming and scripting is a huge part of this new Web interactivity concept, special expertise beyond traditional HTML programming will be required.

Related products and manufacturers: Examples of Web 2.0 products are Google Mail, Yahoo! Mail, Microsoft Windows Live Mail (now in beta), Microsoft Office Live (also in beta),

the Writely word processor (just purchased by Google), and others. In fact, Microsoft is currently developing a whole set of Windows Live applications.

Ajax (Asynchronous JavaScript and XML)

What it is: Ajax is the catchy name for a term used to describe the combination of a number of programming techniques, including CSS, JavaScript, and XML, to program the new types of interactive Web applications and services most often associated with Web 2.0. In this context, interactivity means that a Web page behaves more like a traditional "shrink-wrapped" application: A user can interact with and change part of a Web-based application without having to reload the entire page to see the changes.

Why you should care: Sign up for a Yahoo! Mail or Google Mail account and interact with the service for a few days, and you'll get a feel for what the future of the Web holds. If you plan to eventually create these types of applications in your business, you will need to understand the technologies underlying Ajax.

Related products and manufacturers: Examples of tools used for Ajax development include Microsoft Visual Studio, JetBrains IntelliJ IDEA 5.1, InterAKT JSEclipse, and others.

The next service module, Design, Build, and Commission, executes the design and construction recommendations from the Data Center Analysis and Planning service in a modular approach. Taylor says, "This enables companies to commit only the capital necessary for the short term and grow their facilities as their IT infrastructure needs expand. Also, intense testing and certification ensure that data centers are operating optimally from the outset."

Relocation, the third service module, plans and executes data center relocations, consolidations, and migrations. Taylor elaborates, "Data center moves are infrequent and specialized events. Collective has more than a decade of experience managing these moves, from the relatively simple to the incredibly complex. The company's trained and experienced project management teams

coordinate all facets of data center moves and offer a single point of contact for the customer." The final service module, Periodic Data Center Evaluation, updates quarterly to the high level data center strategy.

Taylor says this also serves as an early warning for future changes to the data center that will be required.

A Unique Solution

According to Taylor, not much is happening elsewhere in the DCLM space. He says, "Collective has few competitors offering end-to-end data center life cycle management. Some large vendors such as IBM Global Services claim some of the same capabilities, but their main concern is selling IBM hardware. Collective is a vendor-neutral provider that recommends the optimal hardware, software, and configurations to suit each customer's unique needs." Taylor says Collective Technologies is the only company that offers IT infrastructure, design and build, and relocation services in one single solution. "By doing so, DCLM facilitates the marriage between IT, facilities, and the business, providing a single vendor responsible for all project and change management."

Based on its recent success on a project with Columbia University, Collective Technologies has started looking at colleges and universities as key targets for its DCLM solution. Taylor says, "So far, we've seen very strong interest in this community, which has unique data storage and privacy needs that necessitate frequent data center upgrades. We feel that demand for our DCLM solution will be strong for years to come." □

Next Week In Processor . . .

Coming In Our June 30 Issue:

Hardware installations can become so routine that it's easy to forget simple steps or overlook basic precautions. We provide some expert tips, along with a look at some of the top smaller hardware manufacturers and advice for adding new servers to an older data center.

You'll also find:

- Tips for choosing the right compliance vendor
- A look at VPN on-the-fly products and technologies
- Common uses for Linux in the enterprise
- How the TCO of thin clients compares to that of standard desktops

Be sure to visit Processor.com to find each week's issue online. You can view issues as a PDF or search our article database for the information you need.

Manufacturer Presentation

End Nodes - Storage Advertisement

New DataPort 25 'Mobile & Secure' Removable 2.5-inch Drive Enclosures

The **DataPort 25** makes 2.5-inch hard drives removable from any standard 3.5-inch bay such as the floppy bay in PCs and servers, making it ideal for data backup, data transporting and archiving, or applications such as mobile computing and surveillance.

New **DataPort 25 'Mobile & Secure' Drive Carriers** combine the benefits of both removable drives and rugged external storage devices. Operating at full transfer rates while in the bay, the new carriers also allow users the versatility to take their data elsewhere and access via USB or FireWire without the tether of a power cord. Optional encryption provides ultimate data security.



CRU-DataPort offers several removable drive carriers to choose from and a universal frame that supports them all:

Standard Carriers accommodate two PATA or SATA drives to double capacity or create a palm-sized RAID for data integrity or improved performance.

USB or a combination of USB & FireWire are available for ultimate flexibility in remote data access.

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Manufacturer Presentation

End Nodes - Mobile Advertisement

MPC COMPUTERS INTRODUCES THE TRANSPORT® T1300 NOTEBOOK

This new system features the latest in notebook PC technology, such as the new Intel® 945GM chipset, TPM (Trusted Platform Module), and Bluetooth. The chipset supports 667MHz DDR2 SDRAM memory and can be powered by the optional Intel® Core™ Duo mobile processor technology.

Intel Core Duo mobile technology provides greater overall system performance by running multiple tasks simultaneously. TPM ensures greater protection and security, while the integrated Bluetooth technology enables wireless connectivity with a multitude of peripherals.

The TransPort T1300 offers many other enhancements as well. The system features a 14.1-inch wide-screen XGA display with 1280 x 800 resolution providing a sharp, clear picture. Additionally, the notebook incorporates Gigabit Ethernet, which facilitates faster network connection speeds. The 4-in-1 media card reader allows for quick and easy transfer of various media such as memory sticks, secure digital cards, or multimedia cards.

- Intel Core Duo or Core Solo Technology
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- 667MHz DDR2 SDRAM
- Gigabit Ethernet
- Integrated Bluetooth Communications
- 14.1-inch WXGA Display (1280 x 800)
- Trusted Platform Module (TPM) v 1.2
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Manufacturer Presentation

End Nodes - Storage Advertisement

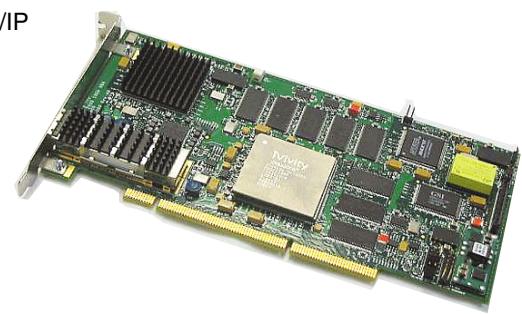
iVivity's Application-Specific 10Gbps iSCSI Host Bus Adapter

Leveraging its iDiSX 2000 storage network processor architecture, iVivity created a full 10Gbps application programmable iSCSI, TCP/IP, and UDP Host Bus Adapter (HBA) for array, appliance, and server OEMs.

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The iDiSX PCI-X Host Bus Adapter provides full network protocol controller functionality along with standards-based programmability that can be used to enhance the performance and functionality of a wide variety of applications, including CDP, VTL, snapshots, data migration, virtualization, and WAN optimization. Basic capabilities include:

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Manufacturer Presentation

End Nodes - Components Advertisement

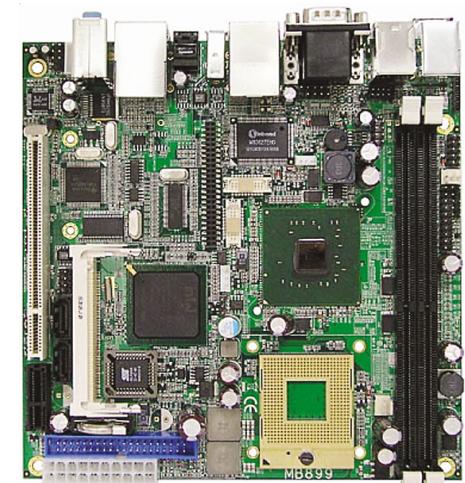
Based On Intel® Core™ Duo Processor & Mobile Intel® 945GM Express Chipset Embedded Motherboard—MB899

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Manufacturer Presentation

End Nodes - Printer Advertisement

High-Definition Line Matrix Printer For Windows-Based Applications

The new P7000HD Series prints True Type™ fonts, logos, and bar codes accurately, giving users a cost-effective and highly reliable alternative to the laser printing of reports, bills of laden, forms, and labels.

Created as a cost-effective alternative to Windows™-based laser printing applications, the new P7000HD series is optimized for graphics printing demanding the highest reliability. It is the only line-matrix printer available in the market today that can operate seamlessly in a Windows environment and emulate all of the fine details required for TrueType fonts, fine print, logos, and bar codes.

Printronix designed the P7000HD for applications typically found in manufacturing, banking, distribution, and transportation environments, such as the printing of reports, bills of laden, multipart forms and bar-code labels. The P7000HD features 11-mil (0.28mm), fine-point hammer tips that print at least 180 x 180 dots per inch (dpi). This resolution rivals the print quality of laser printers at a fraction of the operating cost.

- High-Definition print image – 180 x 180 dpi and fine tip hammers
- High quality rendering of complex fonts, small point sizes, lines, logos, bar codes, and PDF files
- Direct drop-in replacement for Windows-driven laser printers
- P7000 Ultra Capacity HD ribbon – Extra long life with darker sharper print
- Integrated Print Management – total visibility and control of image quality and consumables
- Low cost of operation – typically 10x lower than laser or serial matrix
- Forms flexibility – straight paper path and heavy-duty pulling power
- Super rugged design holds up to abuse and harsh environments
- 100% duty cycle – designed for relentless printing
- Whisper quiet operation – models range from 55 dBA, which is less than an office laser
- Pedestal, quiet cabinet, and zero tear models available



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Manufacturer Presentation

End Nodes - Storage Advertisement

CryptoStor KeyVault™ Enterprise-Class Key Management



Data-at-Rest Encryption Key Management

- Central management of data-at-rest encryption keys
- Automated and secure archival and recovery of keys
- Cost-effective deployment
- Granular security for tape, disk, and SAN VPN

NeoScale CryptoStor KeyVault is the industry's first secure, automated and open enterprise-class appliance for data-at-rest encryption key management. From its FIPS 140-2 Level 3 compliance to its open APIs allowing third-party vendor integration, CryptoStor KeyVault provides customers with significant operational cost savings today while consolidating their key management systems in the future. CryptoStor KeyVault delivers automated key management that allows one-step disaster recovery, secure sharing of data with business partners, and key sharing with unprecedented security and ease of use.

Key and Policy Management

Create	Random key creation to ensure data privacy. Hardware and Software Random Number Generation for maximum security
Distribute	Secure and automated key distribution for multisite access to keys
Archive	Secure long-term archiving of keys to ensure compliance with information retention requirements
Share	Secure and simple sharing of encrypted data with business partners
Recover	Recovery of encrypted data and keys when needed at any site. Keys are not accessed until actually needed for highest security
Delete	Enforcement of data destruction across multiple locations to meet compliance requirements

 **NeoScale™**

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888-636-2797

Manufacturer Presentation

End Nodes - Server Appliance Advertisement

Mail Foundry 1150 - Antispam Appliance Designed For The SME

The MailFoundry 1150 antispam appliance blocks 100% of known spam and viruses with the lowest false-positive rate in the industry of less than 1 in 1,000,000. MailFoundry has a team of human editors who create Spam Profiles around the clock, designed to block specific spam without creating false positives. These updates are automatically distributed to MailFoundry appliances worldwide every five minutes and immediately applied to defeat spam outbreaks as they happen.

MailFoundry has developed its own filtering engine, known as MessageIQ, which runs on a PC-like platform with a hardened Linux OS. And while the entry-level 1150 is not designed for rack-mounting, it is compact enough to be unobtrusive. The MessageIQ engine is a multilayer filter, incorporating traditional techniques such as blocked senders, real-time blackhole lists, and reverse DNS lookup and adds what MailFoundry terms spam profiles—custom-built, targeted message identifiers. These human-crafted profiles are similar to virus signa-

tures in that they don't rely on brute force checksums, hashes, or lexical analysis but are based on repeatable message attributes used by particular spammers.

- For up to 150 users
- MessageIQ antispam/antivirus engine
- Desktop or shelf-mount chassis
- 12" (305mm) x 2.1" (54mm) x 11" (279mm)
- Outbound email scanning
- Easy-to-use Web admin interface
- 90-day hardware warranty
- M-F telephone support (7 a.m. to 8 p.m. CST)

The MailFoundry 1150 is available for \$799 with a yearly subscription cost of \$99 for up to 150 users and can be ordered online at www.Processor.com/Mail or by calling 1-888-302-6245.



It not only fits on the shelf, it fits in the budget!

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PROTECTING THE MESSAGE

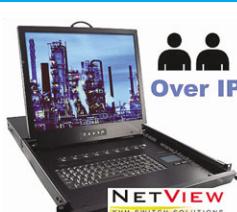
KVM

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- High resolution - up to 250MHz
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Manufacturer Presentation

End Nodes - Server Advertisement

Performance Technologies CPmpactPCI

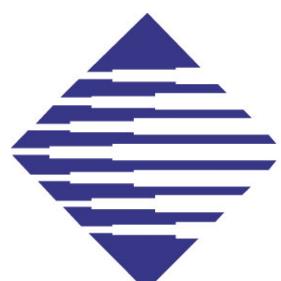
Performance Technologies' offers the world's first CPmpactPCI 2.16 computer blade based on 64-bit single- and dual-core AMD Opteron processors. Designed to run Linux, Solaris, and Windows operating systems, it is an ideal computer for high-end packet processing or multithreaded software applications found in wireless, softswitch, defense, and other computer-intensive applications

The CPC5564 is designed for use with Performance Technologies' complete line of Advanced Managed Platform products. The Advanced Managed Platform is the basis of a family of application-ready, fully managed platforms, allowing system designers to build NEBS-compliant, highly reliable solutions that combine state-of-the-art switching, system management, and a full line of slot components and software.

Volume Pricing starts at \$2,995.



For More Information on the new SEGway™ 6300 Compact-STP, please
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Manufacturer Presentation

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SuperTrak EX16350/EX16300 16-Port SATA 3Gbps RAID Controller

From Promise Technology

SuperTrak EX16350/EX16300 highlights:

- 16-port SATA 3Gbps advanced RAID controllers
- Intel IOP 333 (EX16350)/331 (EX16300) processor
- RAID support 0, 1, 5, 6, 10, 50
- PCIe (EX16350) and PCI-X (EX16300) host bus interfaces
- Web-based WebPAM™ management software
- Linux open source driver available
- 256MB onboard cache
- Dual controller support
- Optional battery backup module available



The SuperTrak EX16350 and EX16300 from Promise Technology are Intel IOP-based RAID5/6 controllers that combine high performance with unbeatable prices. The SuperTrak EX16350/16300 controllers include Promise advanced RAID features such as multiple logical drive support, media patrol, and bad sector remapping for maximum data protection and management.

The SuperTrak series is designed to fulfill the needs of SIs and OEMs with demanding data storage requirements. The SuperTrak controllers deliver exceptional multi-drive performance by taking advantage of Intel's XScale IOP I/O processor technology to offer the ultimate RAID 6 protection for high-level fault tolerance, allowing multiple simultaneous drive failures without downtime or data loss so your data is always protected.

For More Information: www.Processor.com/Promise



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National Instruments High-Performance PXI Chassis & Controllers Increase Dedicated Bandwidth Up To 1Gbps Per Slot

National Instruments developed the industry's first PXI chassis and controllers based on PCI Express signaling, delivering up to 1Gbps per slot dedicated bandwidth. Engineers can use the new PXI Express chassis and controllers to improve performance for PXI systems and integrate high-bandwidth PXI Express modules as they become available. The new chassis and controllers add capabilities from the latest PXI specification, which defines PXI Express to increase PXI bandwidth by 45 times, to integrate the industry's best timing and synchronization, and to preserve compatibility with existing software and more than 1,000 PXI modules. By increasing throughput and improving measurement accuracy, the new chassis and controllers are ideal for high-channel-count, high-throughput, or multimodule applications such as IF streaming, mixed-signal, or image acquisition.

- NI PXIe-1062Q 8-Slot PXI Chassis Accepts PXI and PXI Express Peripheral Modules with Up to 4Gbps System Bandwidth
- NI PXIe-8103 Embedded Controller Features a 2GHz Intel Pentium M 760 Processor and Up to 1Gbps System Bandwidth
- NI MXI-Express (NI PXIe-PCIe8361/2 and NI PXIe-ExpressCard8360) for Desktop PC and Laptop Control with Up to 250MBps System Bandwidth



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VXA - 172 Packet Tape Drive & PacketLoader Tape AutoLoader



VXA-172 Packet Tape Drive:

- Huge Capacity! Up to 172GB (compressed)
- Fast Speed! Up to 43GB/hour (compressed)
- 2x speed and 4x capacity of DAT72/DDS-5
- Capacity on Demand allows drive to double to 320GB with simple electronic upgrade—an industry first!
- VXA Tapes offer two cartridge capacities (172GB for \$29 or 80GB for \$15) allowing you to pay only for the capacity you need
- Priced at just \$700 (est. U.S. street)

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VXA-172 PacketLoader 1x10 1U Tape Autoloader:

- 10-cartridge capacity; up to two weeks of unattended backup
- Up to 1.7TB of compressed storage
- Up to 43GB/hour transfer speed
- Capacity on Demand allows drive to double to 320GB/tape, 3.2GB total storage, with simple firmware upgrade—an industry first!
- VXA Tapes offer two cartridge capacities (172GB for \$29 or 80GB for \$15) allowing you to pay only for the capacity you need
- Slim 1U form factor, barcode reader included standard
- Priced at just \$1,700 (est. U.S. street)

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Manufacturer Presentation

End Nodes - Storage Advertisement

Easy-To-Use & Affordable NAS Drive from SmartDisk

This cost-effective storage solution combines the simplicity of a local drive with the functionality of a network attached storage (NAS) system. Supporting both Windows and Mac operating systems, the drive connects to any computer or network via Ethernet 10/100 LAN as well as USB2.0. The SmartDisk NAS drive is easily configured using a standard Web browser and for Mac environments supports Apple's Bonjour™ technology. Printers can be shared via the USB print server.

According to Charles Klinker, vice president of marketing for SmartDisk, "The growth of networks, coupled with content explosion, is fueling consumer demand for more storage—more specifically, shared storage. The consolidation of a family's multimedia content onto one shared drive is a growing trend among households with multiple computers. The SmartDisk NAS was designed for the SOHO network and does not require any LAN certifications to install."

Pricing and Availability

Suggested retail price for the SmartDisk NAS drive is \$279.99 for the 250GB version and \$379.99 for the 400GB version.



For More Information:

www.Processor.com/SmartDisk or Phone (239) 425-4000



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- Trackball or Touchpad
- 6U/8U Panel Mount Available
- Optional KVM Switch Functions



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Manufacturer Presentation

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UltraStor™ - IP SAN Storage System

Ultra Fast & Flexible Host Engine from Fibre Channel, iSCSI, and SCSI

RS 8 IP - 10/100/1000



RS 16 IP - 10/100/1000

**Enterprise RAID Performance**

The original UltraStor product line capitalized on Enhance Technology's hybrid storage expertise by combining SATA disk drives with either a SCSI or Fibre Channel host interface. The UltraStor IP utilizes newer, faster Serial ATA 3Gbps disks and is powered by the latest microprocessor to deliver up to 220MBps over a Gigabit Ethernet network, enough bandwidth to exceed the demanding requirements of many network-based applications. With UltraStor IP, Enhance has created a product that supports multiple hosts and runs on both the Windows and Mac OS platforms while offering easy configuration and integration into virtually any hardware or software environment.

Key Features Include:

- Hybrid Serial ATA disk-based storage, compatible 1.5 and 3Gbps disks
- Embedded hardware RAID controller with dual GbE ports
- 2U or 3U modular rack design easily integrates into existing storage infrastructures
- 2 GbE full iSCSI offload with load-balancing and failover
- One logic volume shared by as many as 16 hosts
- Windows VDS/VSS/MPIO support, host access control, and CHAP
- Easy LCD control, Remote monitoring, and RAID management over TCP

Full iSCSI Benefits

The UltraStor IP system has dual GbE ports, supporting full iSCSI offload with load-balancing and failover and one logic volume shared by as many as 16 hosts. Other new features introduced in the UltraStor IP system include MPIO support, S.M.A.R.T. disk monitoring, target authorization via IP address, and Jumbo frame support.

UltraStor Product Availability and Host Flexibility

UltraStor IP is available for immediate delivery in the form of a 2U eight-disk RS8 IP model, which has the storage options of 1TB, 2TB, or 4TB; the 3U 16 RS16 IP model can go up to 8TB.



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iX104C²DV Dual Mode with Allvue™ - a durable mobile computer that offers users both active stylus and finger touch input, as well as the optically enhanced Allvue™ display, all in a single product offering.

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- Working in minimum light or glaring sun is never a problem with AllVue™ display



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Printerwww.Processor.com/TallyGenicom

High-Speed Serial Matrix Printer From TallyGenicom
The 2265+ printer is available in a variety of configurations, making it the ideal choice for multiple connectivity environments. The configurations include parallel only, parallel with serial, internal Ethernet, PCL, and LAN IPDS for IBM AS400/iseries users. List prices range from \$1,845 to \$2,227.



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Manufacturer Presentation

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RAID 1 + Backup Kit**

The ACS76510/ACS76500 is a three-disk SATA-SATA/PATA-PATA RAID kit in which two disks are mirrored to protect working data and the other disk is a backup disk preserving a data image created at a specific point in time. The backup function set-up is either manually from the GUI or automatically according to the schedules set by the user. Under

1+backup, the data can be protected from not only disk failure but also logical failures, such as virus attack, mistaken file deletion, and inappropriate changes of system configurations. As the backup disk preserves a complete image of the original data set, it can be used for restoring data as well as system configurations.

Product Benefits:

- OS independent kits (driverless design)
- Direct connect interface (SATA or PATA)
- Simple (disk to disk) data to data backup
- User-friendly GUI
- Excellent customer service
- Compatibility guaranteed
- Easy Integration
- Two functions in one unit
- Dual protections from disk failure or data corruption
- Plug "n" Play product
- Fast and efficient backup solution

www.Processor.com/Accusys
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The RAID Architects

Phone: (866) 277-5888
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Manufacturer Presentation

End Nodes - Storage Advertisement

**Encrypt The Data On Your
Backup Tapes With Paranoia2**

Backup encryption and data encryption are undoubtedly required to comply with Sarbanes-Oxley, HIPAA, and other government-imposed security regulations. Most companies haven't taken backup encryption into consideration and have only secured their data on their systems from theft or misuse via access controls, firewalls, and specialty software. Few have taken into account the repercussions of a lost or stolen tape backup. Once your data is written to tape, it's completely unprotected. There are no access controls, passwords, or audit trails tied to this data. So without a tape backup encryption solution, all security efforts made thus far are useless. This is why a tape backup encryption solution is necessary.



Your tape backup data is your most critical asset and its potential value for abuse by people outside of your organization is enormous. It's easy to take your unencrypted backup from your backup tapes and read it on any drive, unless tape backup encryption was used. Tape backup encryption is your primary defense for safeguarding tape backups. If you are worried about data protection, disaster recovery, and compliance, you need Paranoia2.

Paranoia2 is the simplest, most cost-effective and easy-to-deploy tape encryption (backup encryption) solution available. The Paranoia2 backup tape encryption solution is available as an external encryption device or as a complete private key secure backup encryption subsystem. Paranoia2 uses strong encryption protocol, dual DES3, to protect your data (or 11 other different levels). Encrypted tapes can only be read by another Paranoia unit with the correct user and hardware private key. Paranoia2 is an external on-the-fly tape backup encryption appliance, sitting between the data path and tape storage device. It's transparent to the operating system and the built-in precompression ensures encryption without performance degradation and will in many cases increase your transfer speed and shorten your backup window (up to 68MBps sustained encryption rate). It's an inline tape backup encryption hardware unit that requires no system or software changes and can be used on both stand-alone and library tape drives.

**For a 7-Day Evaluation Unit,
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MIDLAND
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Paranoia2 is the simplest, most cost-effective and easy-to-deploy tape encryption (backup encryption) solution available. The Paranoia2 tape encryption solution is available as an external encryption device or as a complete private key secure backup encryption subsystem. Paranoia2 uses strong encryption protocol, dual DES3, to protect your data (or 11 other different levels).

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- Dual Gigabit LAN Ports
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 San Jose, CA 95131
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Network Attached Storage
www.Processor.com/SmartDisk

The SmartDisk NAS drive is a simple-to-use, affordable network drive. The external drive includes its own 10/100 Ethernet connectivity allowing you to plug the drive directly into your network. The drive then appears as a local drive to each computer connected to your network. The drive comes in a 250GB version for \$279.99 and a 400GB version for \$379.99. www.Processor.com/SmartDisk

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PCI-Express SATA II 3Gb/s RAID Controller
Featuring RAID 6 and also 0, 1, 0+1, 3, 5 and JBOD 4, 8, 12, 16, 24ports, Intel I/O Processor, DDR Memory Online RAID Level/Stripe Size migrations, Online RAID Capacity expansion and RAID level migration simultaneously, NCQ and Staggered Spin-up Support, Battery Backup ready, I2C, Full OS Support.

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Manufacturer Presentation

End Nodes - Storage Advertisement

Linux NAS Storage

Aberdeen Expands the AberNAS Line of Enterprise-Class Storage Appliances to Include Linux



View our line of Linux AberNAS appliances at
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- Up to 4TB of Pure Storage Capacity
- Up to eight Hotswap Drives w/SATA II 3Gbps transfer speed
- Single RAID Array w/o Limitations
- Browser-based Hardware RAID Manager
- RAID 0, 1, 5, 6 Configurable
- Virus Resistant Operating System
- iSCSI Target Capable
- NAS-2-NAS Replicator
- Custom GUI Management Interface
- PCBackup Utility

Aberdeen is proud to be the first company to provide both Linux-based NAS and Windows-based NAS. The newly added Aberdeen AberNAS Linux appliance storage servers deliver enterprise-class network-attached storage that can optimize IT departments from a startup small business to the largest of IT environments.

The AberNAS Linux-based line of NAS servers can provide the best cost/GB ratio in the market with a 1U 2TB unit of pure storage up to 4TB 2U models. As an enterprise-class NAS appliance, the AberNAS can deliver a robust open storage platform with centralized management of network storage. It supports mission-critical applications with cluster capability, replication, high-speed backup utilities, and most impressively, a custom GUI management interface.

The Aberdeen AberNAS Linux-based storage appliances allow IT managers to enjoy the benefits of a feature-rich, high-performance network attached storage without the high cost of ownership or sacrificing on security.



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Manufacturer Presentation

End Nodes - Printer Advertisement

Multifunction Printer

For users who are interested in purchasing a new MFP but also have extensive finishing requirements, Lexmark offers the new **Lexmark X646ef** laser printer bundle, which includes the new 4600 scanner, a T644dtn laser printer, and finishing capabilities such as stapling and sorting at an estimated street price of **\$4,449**.

The Lexmark X646ef is the first MFP in its class to feature a standard scan preview function to allow users to view a scanned document before it is processed. It is also the first MFP in its class to feature a USB port to allow users to scan to or print PDFs and images from a USB flash storage device directly from the operating panel. The Lexmark X646ef is the only MFP in its class with a color touchscreen interface and offers the fastest print speed in its class at up to 50ppm.



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Manufacturer Presentation

End Nodes - Storage Advertisement

Business Continuity Appliance



STORServer Business Continuity Appliances are a suite of fully integrated data protection solutions for backup, archive, disaster recovery, and lifecycle management. Each turnkey appliance includes matched and certified hardware and preconfigured heterogeneous software for easy-to-use, policy-driven, comprehensive data protection.

STORServer EZ Backup is the latest addition to the STORServer Appliance suite. EZ Backup Appliances offer the same functionality as the Business Continuity Appliance suite but are built exclusively with IBM components. EZ Backup also offers an entry-level solution built on IBM Express.

Built for small and medium-sized businesses (SMBs), STORServer Appliances are scalable, enterprise-wide solutions that support most popular platforms, including database, email, OS, NAS, SAN, LAN, WAN, and mobile, with just one point of contact for warranty and support.

All STORServer appliances are delivered production ready, with everything you need to begin installing clients right out of the box. Typical client installations are deployed within 48 hours.

www.Processor.com/STORServer

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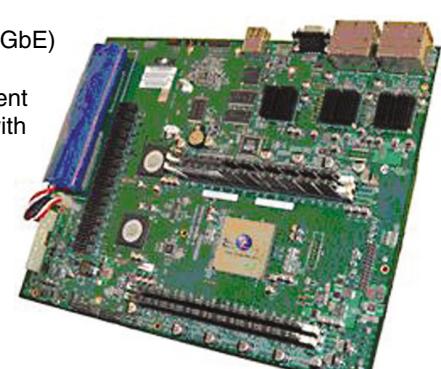
**Manufacturer Presentation**

End Nodes - Storage Advertisement

iStor GigaStorATX™

GigaStorATX is the Newest Generation iSCSI RAID Controller, providing the very best price/performance ratio and most feature-rich integrated iSCSI storage controller solution available in the marketplace. iStor Networks offers the GigaStorATX in a multiple port 1GbE and a single port 10GbE version. Both products are designed to conform to industry-standard ATX form factor specifications, allowing use of off-the-shelf PC Server and Storage chassis. The GigaStorATX allows OEMs, VARs, and System Integrators to offer competitively priced, performance orientated storage subsystems with an integrated storage firmware stack, lowering the cost of overall maintenance, providing greater ROI and increased customer satisfaction.

- RAID Levels 0,1,10 & Parity
- One 10GbE XFP pluggable iSCSI port (10GbE)
- Up to eight GbE iSCSI ports (GbE)
- Persistent and Adaptive Cache Management
- Up to 4GB Standard ECC DDR SDRAM with 72-hour Battery Backup
- VLAN-based Zoning
- Volume Virtualization
- Link Aggregation, Multipathing, and Load Balancing
- Support for up to 16 SATA devices
- IP SAN Device Manager
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- Enclosure Management Services (Chassis dependent)
- RAID level migration
- Online capacity expansion
- SMI-S Support
- Support of Windows, RedHat, SuSe, and Mac OS
- Many more features—ask your iStor Sales Representative for the detailed list



GigaStorATX eliminates the need for Server or Motherboard Technology. The technologies from iStor Networks offer a complete iSCSI storage system-on-a-chip, coupled with an integrated storage virtualization firmware stack and SMI-S-compliant management suite.

Product Flexibility, Superior Price, and Best-in-class Performance with up to 1,160MBps cache read performance for faster business continuity and disaster recovery applications.



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Manufacturer Presentation

Software - Security Advertisement

BitDefender 9 Professional Plus
Now Includes Antispyware Protection!

BitDefender 9 Professional Plus integrates antivirus, antispyware, firewall, and antispam modules into one comprehensive security package, tailored to meet the needs of computer users worldwide.

Antivirus + Antispyware NEW!

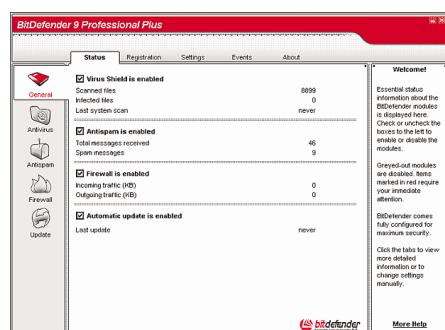
The mission of this module is to ensure detection and removal of all viruses and spyware in the wild. BitDefender uses robust scan engines, certified by ICSA Labs, Virus Bulletin, Checkmark, CheckVir, and TÜV.

Firewall

The firewall module protects your data and your privacy by filtering the incoming and outgoing traffic, controlling cookies, and blocking malicious scripts and "XXX-dialer" type programs.

Antispam

Quite simply put, the BitDefender Antispam module deals with the problem of spam so you don't have to.



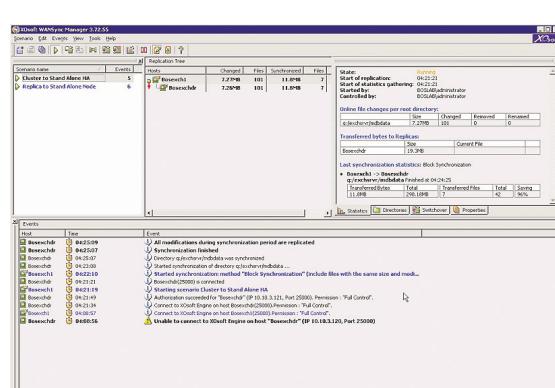
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Manufacturer Presentation

Software - Data Replication Advertisement

WANSync by XOSoft

The WAN-based business continuity platform and data recovery software.



WANSync, the definitive, WAN-based business continuity platform and data recovery software. This data protection solution provides companies with continuous business data flow and ensures seamless integrity, reliability, and redundancy of business-critical information resources. WANSync comprises a comprehensive suite of general-purpose synchronization and real-time data replication solutions, including:

WANSync Server—for server data replication and increased protection for application servers of any type, including open files and system settings.

A set of dedicated WANSync solutions provide specific application servers with complete availability assurance. These business continuity solutions include:

WANSync Exchange—an application-aware high availability platform for Microsoft Exchange, providing Exchange disaster recovery and Exchange replication.

WANSync SQL—the most comprehensive WAN-based disaster recovery platform for SQL databases, including SQL server replication and SQL data recovery capabilities.

WANSync Oracle—a disaster recovery solution tailored to handle the specific nuances of Oracle replication and Oracle database disaster recovery.



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Manufacturer Presentation

Software - Network & Systems Mgmt. Advertisement

Manage Network Resources With SWsoft's Datacenter Automation Suite

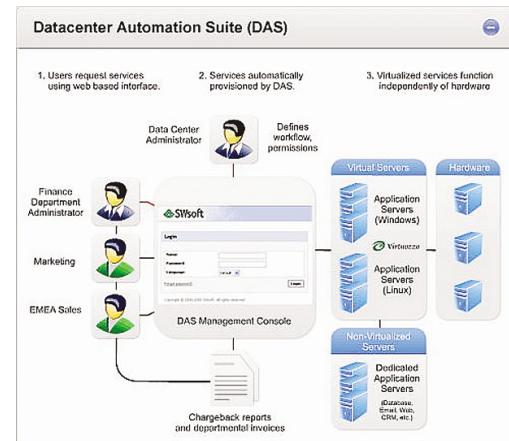
The Datacenter Automation Suite (DAS) is software that allows organizations to manage both virtualized and nonvirtualized servers through an easy-to-use Web console.

The DAS management console is a multilayer structure that enables administrators to assign specific permissions to departments and individual users according to the business rules of the organization.

Using DAS, enterprise data center managers can deliver services to departments, subsidiaries, and users much like an external supplier would.

Automated provisioning and departmental chargeback

DAS enables departments to order services through a custom-designed company portal. Requests are delivered immediately, 24 hours a day, 7 days per week. This allows enterprises to rapidly meet workload demands from a shared pool of available resources.



DAS tracks resource usage for all departments and users in the system. The system administrator can immediately be alerted if a department orders excessive numbers off virtual servers, disk space, or other resources. Enterprises have the option to place hard limits on the amount of resources that departments or individual users can consume. Information about system usage can be exported as needed.

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Manufacturer Presentation**Manufacturer Presentation**

Software - Business Productivity Advertisement

Manage Development Issues With TestTrack Pro nPath

The management challenges in a software engineering group are found throughout an enterprise. While roles and skills differ by department, the need for good communication, accountability, quality, and repeatable processes remain constant. Software solutions such as TestTrack Pro help the software engineering group model and manage their processes and track issues vital to a successful product release. TestTrack Pro is built on an advanced, flexible workflow and issue management architecture with 10 years of customer input behind it. Today, thousands of companies rely on TestTrack Pro to keep their development and quality assurance efforts on track. What if other departments could leverage this technology? Not only would they improve efficiency, but the IT department would have a single process management architecture to support enterprise-wide.

nPath, Seapine's newest business process management tool, provides a clear path to automating and streamlining business processes. Like TestTrack Pro, nPath's powerful toolset allows companies to connect people to information, making end-to-end process management possible. nPath makes it easy for companies to track work as it moves through the organization, ensuring the right work gets to the right person at the right time. Through advanced workflow planning, issue management, communication, and reporting capabilities, nPath enables key collaborative processes, such as streamlining departmental activities or meeting regulatory compliance, to be controlled from start to finish.

Through a combination of tools, technologies, and services, Seapine has provided software engineers with solutions to better manage process, change, and quality. nPath is an exciting addition to the Seapine product family because it gives other departments the same benefits our software development customers have enjoyed for so long.

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Throughout the Enterprise

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Manufacturer Presentation

Software - Mobility Advertisement

BOSâNOVA Mobile

BOSâNOVA Mobile is the ideal solution for Field Agents, Sales Personnel, and System Administrators who need to retrieve or upload information from any location to their organization's iSeries, making iSeries available anytime.

The need to extend iSeries access to a mobile workforce has now been answered: BOSâNOVA Mobile enables remote users to perform their tasks from anywhere, using Terminal, PDA, and cellular phones.

BOSâNOVA Mobile combines the convenience of the mobile device and the Personal Digital Assistant (PDA) with the stability and strength of BOSâNOVA abilities when it comes the iSeries environment.

Provide Keep-alive: The BOSâNOVA Mobile Server maintains active open sessions for a defined period of time if the mobile device is accidentally disconnected from the server. The server translates and saves the last received screen, allowing the user to reconnect to open

sessions and continue operation from the last screen.

Enable Automatic Client Installation and Update: The BOSâNOVA Mobile Server provides a Web interface for automatic client installation and update.

- Client-server architecture allows for authenticating and authorizing users
- Extends legacy systems' capabilities for Web or wireless host access
- Web-enabled Green Screens
- Preserves investment in iSeries
- Easy implementation for different mobile device processors and different operating systems

For More Information:
www.Processor.com/BOSaNova11
(866) 865-5250



Database & Data Mining

www.Processor.com/Pervasive

What does bad data cost and can you afford the risk?

Fast, easy, and affordable **Pervasive Data Profiler** eliminates the complexity, risk, and expense associated with manually checking data. Versatile and easy to use, **Data Profiler** enables you to improve IT productivity, avoid costly rework, and increase ROI around your applications and business processes.

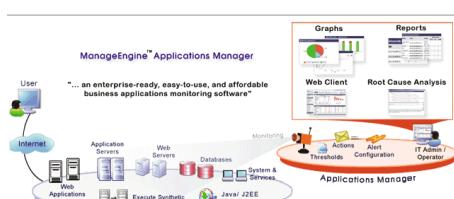
Benefits Include:

- Save Effort - understand irregularities in data before you load the data
- Reduce/Rework - analyze each data set and generate actionable, objective reports on data quality
- Do More, Faster - easily automate profiling processes



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Management Suite

www.Processor.com/AdventNet7


ManageEngine Applications Manager

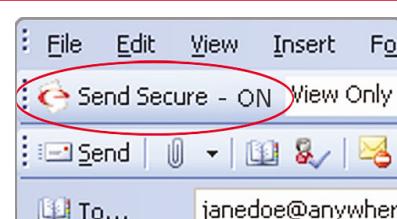
AdventNet's comprehensive management software that helps to monitor performance and availability of application servers, heterogeneous databases, custom applications, Web sites, systems, and network services.

- Enterprise Ready • Affordable • Easy-to-Use



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Email Utility

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Essential Taceo™ provides commercial grade email security that is affordable as an easy-to-use desktop solution. Integration with Outlook secures your email communications with powerful encryption and assigns access protection and usage control enforcement to prevent accidental or intentional data misuse.



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Management Suite

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TOWER Software, a leading enterprise content management (ECM) provider, delivers electronic document and records management (EDRM) software solutions. The TRIM Context® software solution is a single, integrated platform that manages business information through its complete lifecycle.

- Document Management
- Email Management
- Process Management
- Records Management
- Web Content Management (NEW!)

Learn more by visiting www.Processor.com/TOWERSW



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Software - Network & Systems Mgmt. Advertisement

Notification & Resolution For SMBs & The Enterprise

Next-generation AlarmPoint is an enterprise-wide notification and event resolution platform that centralizes all system events and provides repeatable resolution processes. The AlarmPoint product suite is built to automate event resolution by managing the needs of today's mobile workforce. Designed to filter, suppress, and enrich important events, route those events to the right person on any communications device, and give the person the ability to solve, escalate, or enlist others to resolve, AlarmPoint bridges the gap between business-critical IT services and relevant human resources.

Powerful system flexibility and capabilities

- Role-based Web user interface
- Intelligent event management
- Event assignment and subscription
- AlarmPoint now on any OS platform
- Localized UI language options for 12 languages

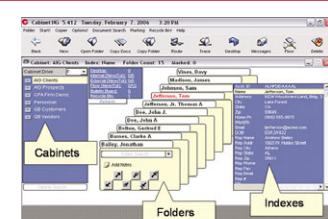
Discover the benefits of an easy-to-maintain event notification and resolution solution built for self-service automation.

- Contact and device management
- Personnel and group scheduling
- Acknowledgement from Web or any other device
- Self-service event reporting

AlarmPoint® Systems

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File Management

www.Processor.com/CabinetNG


Electronic Document Management Solution

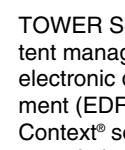
Cabinet NG eliminates "paper-pain" for SMB/SMEs. Cabinet NG's document management software (CNG-SAFE) turns labor-intensive, error-prone, paper-based processes into efficient office workflows. CNG-SAFE is a vital tool for companies striving to meet compliance requirements.

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TOWER Software, a leading enterprise content management (ECM) provider, delivers electronic document and records management (EDRM) software solutions. The TRIM Context® software solution is a single, integrated platform that manages business information through its complete lifecycle.

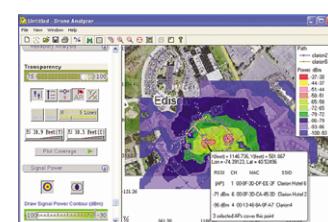
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Wireless Management

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Drone automatically scans all 802.11b/g channels and correlates them to your exact location making it effective for coverage validation studies. GPS measurements provide LAT, LON, and time stamping for a comprehensive Wi-Fi survey path worldwide. RSSI, MAC, and SSID survey data may be laid out in multiple graphical and tabular windows and exported into KML files for plotting in apps such as Google Earth.



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Manufacturer Presentation

Software - Storage Advertisement

Latest Generation Remote Office Backup/Recovery Software Televaulting 6.0

Asigra Televaulting™ 6.0 delivers the industry's only hot agentless Oracle 10g, SQL 8.0, and VMware XML support; silent mass deployment capabilities; and cross platform protection. Tape-based backup for remote office/branch office (ROBO) is a less viable option for distributed enterprises because of the hardware and software costs involved, agent licensing and maintenance, level of onsite IT support necessary, and reliability of the backup.

Multiply these issues by the number of remote sites requiring data protection, and simplified remote site protection becomes a high priority. For corporations with regulatory, performance, reliability, accountability, and cost challenges, Asigra's disk-based agentless software provides a single answer for distributed site backup management.



Televaulting 6.0, the industry's only high-performance agentless backup/recovery software for remote office protection, now features hot agentless database backup for DB2, Oracle 10g, and SQL 8.0, allowing database users to operate while backup operations are in process without disruption. The software also includes a block-level resume feature for Oracle, so if a connection is lost, the backup session can be continued at the block level rather than the file level, maintaining a high service level.

Asigra Televaulting Version 6.0 is now available through resellers and service providers with pricing starting at \$11,250 U.S.

Asigra: (416) 736-8111
www.Processor.com/Asigra

**Manufacturer Presentation**

Software - Security Advertisement

ScriptLogic's Security Auditing Software: Enterprise Security Reporter 3.0

Enterprise Security Reporter™ is an agentless, fast, comprehensive discovery and reporting solution for analyzing file security, group memberships and other security settings on Windows servers.

Discover

Centrally audit security settings from Active Directory and Windows servers across your enterprise

Report

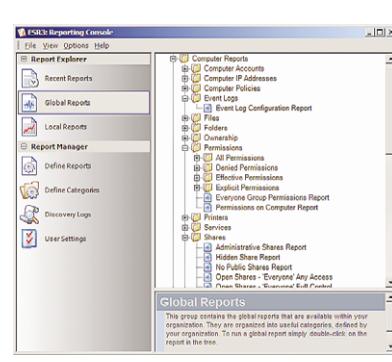
Utilize turnkey reports or create your own with our intuitive Wizard-based report designer to view the security configuration of your Windows environment

Analyze

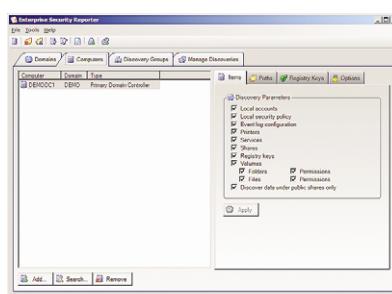
Compare two discovery "snapshots" to detect changes in security that have occurred

Notify

Schedule reports to be delivered via any SMTP-based email system



Reporting Console



Discovery Console

For a 30-day evaluation, visit www.Processor.com/ScriptLogic

**Manufacturer Presentation**

Software - Network & Systems Mgmt. Advertisement

Access Tracking Manager For Your Reporting Needs

XTS Access Tracking Manager (ATM) is an off-the-shelf enterprise management reporting and analysis product for Citrix Presentation Server Enterprise Edition. It's perfect for quickly running reports on the wealth of data Citrix collects, including user, application, and server activity. Do this with little effort with our ATM, a product built based on feedback from the Citrix community. ATM provides turnkey, comprehensive usage reporting for Citrix environments. ATM is not another real-time monitoring product, but instead a robust historical reporting and analysis product built on a business intelligence platform—no data collection agents or coding required.

Benefits:

- Automatically schedule and distribute reports.
- Make procurement and capacity planning decisions based on application usage trends and server utilization.
- Provide business-friendly reports that will allow managers to track employee application usage.
- With ATM's scalable architecture you can run reports over unlimited time periods, such as for annual audits.
- Verify security policies with session reporting down to the minute.
- Integrate with IT dashboards or central reporting data warehouses with XML integration.
- Adhere to compliance and governance with named-user application usage reports over any time period.

Find Out More Today!

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www.Processor.com/XTS**Manufacturer Presentation**

Software - Security Advertisement

Manufacturer Presentation

Software - Network & Systems Mgmt. Advertisement

Holistic Approach To Performance Mgmt.

IT managers require the effective, flexible tools that can provide the highest degree of visibility across the infrastructure. Today's network managers are no longer responsible for only bandwidth and connectivity issues but must take into account how the network impacts both applications and users. IT managers must bridge the integrity gap by creating a culture and organizational structure that reflects the strong interdependence between the network and applications.

Visual UpTime Select integrates the analysis of application performance with analysis of network performance so IT departments can take a holistic approach to network and application performance management. Visual's objective is to enable IT departments to measure the success in business terms based on the high performance of the mission-critical applications.

IT and network managers can improve network application integrity.

- Increase application availability by improving business performance with a detailed understanding of both the applications and network domains.
- Reduce operational costs by developing more efficient application performance management solutions and by not resorting to always having to add more bandwidth.
- Control potential problems by proactively accessing performance data from across the entire infrastructure to uncover unauthorized applications, bandwidth hogs, viruses, congestion areas, and trends.
- Optimize bandwidth by allocating the right amount of bandwidth to maintain application performance without exceeding budget limits.
- Optimize network application integrity by arming network managers with the enhanced tools they need to analyze network usage, troubleshoot application delivery, and ensure network application integrity.

For more information on Visual UpTime Select:Visit www.Processor.com/Fluke4

Or call (301) 296-2333



Manufacturer Presentation

Software - Security Advertisement

ENDFORCE Enterprise allows enterprises to enforce security policies and gain control of their network.

ENDFORCE Enterprise is a software-based, vendor-neutral framework that protects enterprise networks from noncompliant or untrusted endpoints by enabling enterprises to enforce security policies and gain control of their network security. Leveraging the existing network, user store, and security software infrastructures, ENDFORCE Enterprise enables enterprises to:

- Centrally define security policies for endpoints
- Proactively assess compliance prior to network access and during the network session
- Report the state of compliance over time and systematically enforce compliance

This extensible solution allows enterprises to deploy a network access control solution today that provides comprehensive security policy management and enforcement, which extends the capabilities of Cisco NAC, Microsoft NAP and TCG/Trusted Network Connect architectures as they are developed.

Multiple enforcement options, used alone or in combination, provide enterprises with 100% network enforcement coverage.



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Access Control

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CRYPTO-BOX: Protects software and online media distribution with the powerful AES / Rijndael encryption algorithm on board. Designed for Electronic Software Distribution (ESD), Pay-per-use license management, and online subscription services. Allows secure online activation, automated remote updates, and web access control.

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- Gives end users the ability to reset personal passwords by correctly answering a series of private questions
- Remote employees with access to a Web browser can reset forgotten passwords without outside assistance
- Allows for integration with Microsoft® and third-party Windows® logon dialogs

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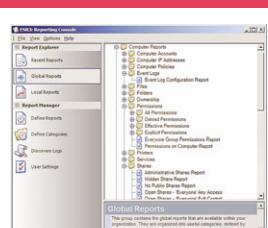
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Security Suite

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Enterprise Windows Mgmt: Zero In On Security Holes

Enterprise Security Reporter™ is an agentless, fast, comprehensive discovery and reporting solution for analyzing file security, group memberships and other security settings on Windows servers. Visit Processor.com/ScriptLogic for a FREE 30-day evaluation!



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Security Suite

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BitDefender Now Includes Antispyware Protection!

BitDefender 9 Professional Plus integrates antivirus, anti-spyware, firewall, and antispy modules into one comprehensive security package, tailored to meet the needs of computer users worldwide.

www.Processor.com/BitDefender



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Manufacturer Presentation

Software - Security Advertisement

Vulnerability Management

nCircle Focus™ is a breakthrough real-time data synthesis and active analysis tool that enables security professionals to immediately assess network risk and focus their actions. For the first time, users have the ability to instantly view the exact data they need at that moment and manipulate it in real time. Questions that previously required cumbersome reports or manual effort are now answered in seconds with nCircle Focus.



Enterprises generate an overwhelming volume of security data and still do not have the tools to turn this data into the information and knowledge they need to make the best decisions often needed immediately as the threat environment changes. Another type of report is not the answer; they need the information at their fingertips, displayed in a manner that lets them see exactly what they need to see at that moment.

Here are some common scenarios where nCircle Focus could save hours over any other type of analysis, such as the typical reports generated by vulnerability management products:

- Your log monitoring service alerts you to a large amount of traffic being generated by a host on your network. What type of host is it, what applications is it running, what ports are open, what vulnerabilities does it have, and who owns it?
- A new Denial of Service attack is out for Cisco IP phones and no patch is available yet. Where are the IP phones on your network that are running the vulnerable software version?
- The CEO wants to know if the company is at risk to the WMF threat that one of his board members just read about on the Internet. He wants to know: Is there a patch available? What systems are vulnerable? Where are they and who owns them? Do they have line-of-sight access to high threat zones? Are they running critical applications that fall under regulatory control objectives?

nCircle Focus will change the way security professionals do their job. Focus is available in nCircle IP360 v6.6.

For More Information: www.Processor.com/nCircle

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Manufacturer Presentation

Software - Storage Advertisement

**Addlogix SnapShot
Disaster Recovery Software****What is Addlogix SnapShot:**

It is the most powerful and most complete computer system and data maintenance software. It allows computer users to easily and quickly fix their computer. It can recover lost and/or corrupted files or restore an entirely crashed system to a stable working state in seconds.

How it Works: Addlogix

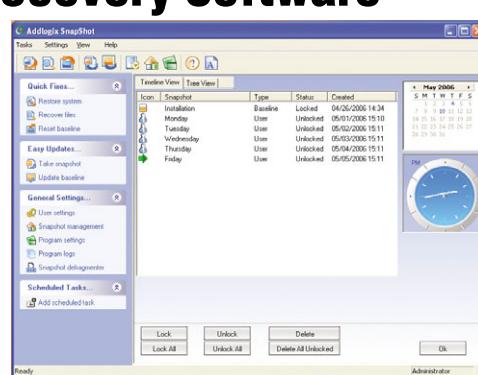
SnapShot allows users to create "snapshots" (maps of the hard disk sectors and the maps' indexing system) of the computer system and data at different times. Users can then select a specific snapshot to recover files or restore the entire system to. Theoretically, Addlogix SnapShot only takes 0.07% total hard disk space to create all the snapshots. However, each snapshot might contain different amount of user data; therefore each snapshot size might differ.

Selective Data Recovery: Addlogix SnapShot offers a unique feature that allows users to preserve or transfer files and data in the current snapshot to another snapshot during a restore process, and therefore not lose any data during the process. For example, users can create a snapshot of the current system before restoring to a selected snapshot. Or users can restore the system with the Advanced Data Synchronization option, which allows users to manually select the files they want to be transferred to the restored snapshot.

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- Restore crashed system to working state
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Software - Physical Infrastructure Advertisement

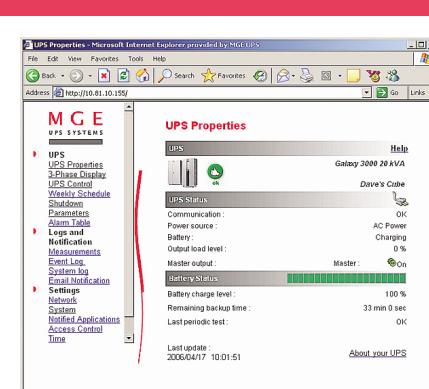
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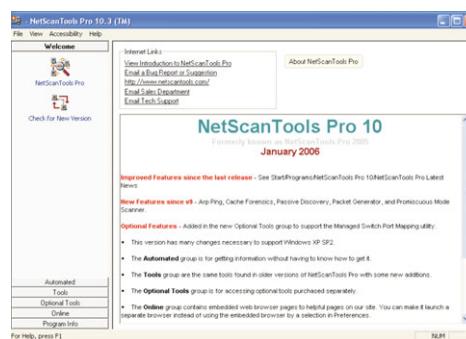


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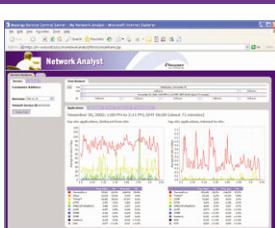
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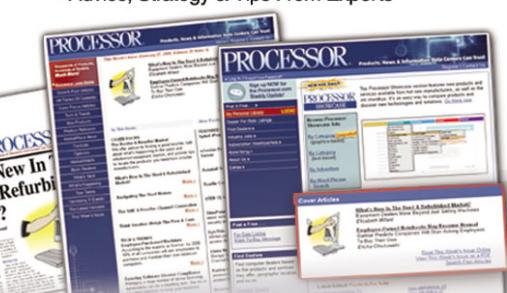
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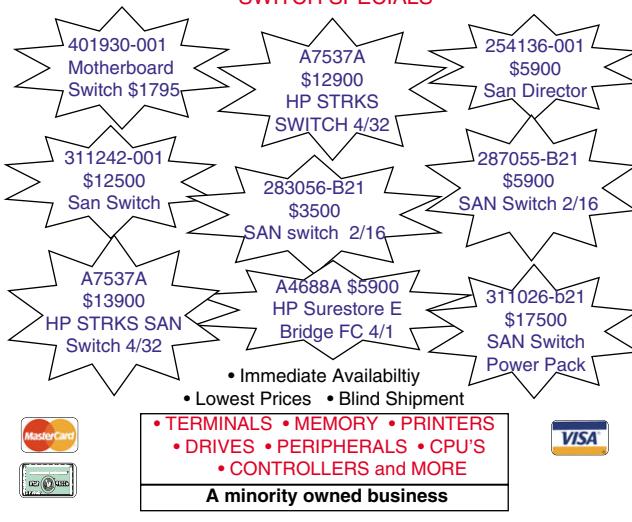
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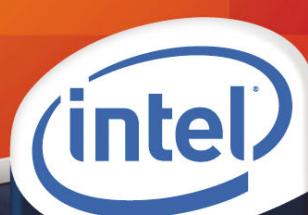
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